State of Michigan (SOM)

Process and Product Quality Assurance (PPQA) Process Manual

Version 2.3

July 2010

Department of Technology, Management & Budget

PREFACE

The initial development of the *Process and Product Quality Assurance (PPQA) Process Manual* was published in October 2009, and was developed as part of a continuing effort to improve the quality, performance, and productivity of State of Michigan information systems. Development of the *PPQA Process Manual* was governed by the Michigan *State Unified Information Technology Environment* (SUITE) initiative.

The purpose of SUITE is to standardize methodologies, procedures, training, and tools for project management and systems development lifecycle management throughout the Department of Technology, Management & Budget (DTMB) in order to implement repeatable processes and conduct development activities according to Capability Maturity Model Integrated (CMMI) Maturity Level 3 requirements.

A formal enterprise level support structure will be created to support, improve and administer all SUITE components, including the Systems Engineering Methodology (SEM), the Project Management Methodology (PMM), and related SUITE components. Until that structure is in place, questions regarding PPQA should be sent to the SUITE Core Team at suite@michigan.gov.

ACKNOWLEDGEMENTS

The State of Michigan would like to thank the following individuals that made this version of the State of Michigan *Process and Product Quality Assurance (PPQA) Process Manua*l possible. Without their input and hard work, this would not have been achieved.

INITIAL DRAFT (October 2008)
SUITE Phase 3 PPQA Workgroup: Virginia Hambric, Leigh A. Scherzer, Celina Kosier, P. Michael Spagnuolo

FIRST RELEASE (October 2009)
PPQA Team (SUITE Phase 4): Ann Harkness, Atul Afre, Cheryl Waters, Dan Buonodono (Lead), Dan Sellers, Jeff Beasley, Mike Bilek, James Osieczonek, P. Michael Spagnuolo, Phyllis Skipper, Rock Rakowski, Steve Davey, Sue Tomes, Susan Felkowski, and Patty Whitlock

The following information is used to control and track modifications to this document.

Revision Date	Author(s)	Section(s)	Summary
09/15/2008	SUITE Phase 3 PPQA Team		Initial Release
02/10/2009	SUITE Phase 4 PPQA Team	Chapters 1, 2 and 3	Added PQA Documents as appendices
10/01/2009	SUITE Phase 4 PPQA Team	Chapters 4+	Incorporated Project Quality Assessment Plan, Checklists, Process Flows, Procedures, Quality Assessment Report, Post Review Action Plan, Post Review Survey
2/25/2010	PPQA Team		Minor wording changes
6/24/2010	Dan Buonodono / PPQA Team	Chapter 5 and Appendix B	Removed PQA Plan, as we are incorporating it into the PPQA Manual itself. Changed MDIT references to DTMB
7/20/2010	Dan Buonodono	Chapter 5, Section B & C	Added section on emailing documents to the SharePoint PPQA Library and a section on the Post-Project Review Agenda

Chapter **Page**

Chapter: **1.0 Overview**

Description: The State of Michigan has established a Project Management Methodology (PMM) and a Systems Engineering Methodology (SEM) that complement one another, as well as ancillary documents (listed below) that further clarify and expand upon the methodologies. The PPQA Process Manual is a companion to these methodologies, guidebooks, and their related process guides and templates.

- Testing Process Manual
- Systems Maintenance Guidebook
- Measurement and Analysis Process Manual
- Structured Walkthrough Process Guide
- Stage Exit Process Guide

The *PPQA Process Manual* is largely based on the PPQA process area description in the *CMMI for Development*, version 1.2, by the Carnegie Mellon University Software Engineering Institute (SEI). PPQA is considered a CMMI Maturity Level 2 process area and is fundamental to the SUITE goal of conducting development activities according to CMMI Maturity Level 3 requirements.

Section: **1.1 Purpose**

Description: The purpose of PPQA is to provide staff and management with a methodology to acquire objective insight into processes and associated work products to ensure compliance with SUITE. PPQA involves the following functions:

- Objectively evaluating performed processes, work products, and services against applicable SUITE process descriptions, standards, and procedures
- Identifying and documenting noncompliance issues
- Providing feedback to project staff on the results of quality assurance activities
- Providing feedback to managers on noncompliance issues that are not addressed by project staff in a timely manner
- Ensuring that noncompliance issues are addressed

In a generic sense, quality assurance consists of a means of monitoring the processes used to ensure quality. Quality assurance is distinctly different than quality control, which focuses on the review of documents and software testing. Process quality assurance relies on the review of artifacts as an indirect indicator that a specified process has been followed. From a DTMB enterprise perspective, PPQA ensures that SUITE processes are consistently used. From a CMMI perspective, two maturity level 3 process areas, Organizational Process Focus (OPF) and Organizational Process Definition (OPD), describe consistent process performance and process improvement across the organization.

PPQA encompasses both processes and products, covering the entire SUITE process. PPQA focuses on the objective evaluation of processes, products, and services. Furthermore, PPQA includes the identification, communication, and resolution of noncompliance issues.

Typical records established by the PPQA process include checklists, quality assessment reports, status reports of issues and corrective actions, and reports of quality trends.

Section: **1.2 Implementation Approach**

Description: Within the context of CMMI, the PPQA purpose to objectively evaluate processes means "to review activities and artifacts against criteria which minimize subjectivity and bias by the reviewer. An example of an objective evaluation is an audit against requirements, standards, or procedures by an independent quality assurance function." (*CMMI for Development*, Version 1.2, August 2006, Glossary, page 544.)

This *PPQA Process Manual* is intended to define PPQA activities and to offer realistic, pragmatic guidance on when and how to conduct those activities, as well as who should be involved in PPQA activities.

The PPQA implementation approach spans two phases, moving from reviews that initially focus on the existence and completeness of artifacts, to reviews that focus on the quality of artifacts. This approach supports the learning process for PPQA team members as well as DTMB managers and staff that participate in Project Quality Assessment (PQA) reviews. Implementation of the second phase of PPQA implementation across DTMB as an enterprise reaches the SUITE long range goal of CMMI Maturity Level 3 compliance.

Subsequent chapters of this *PPQA Process Manual* describe the two phases of PPQA implementation in detail. Following are highlights of each phase.

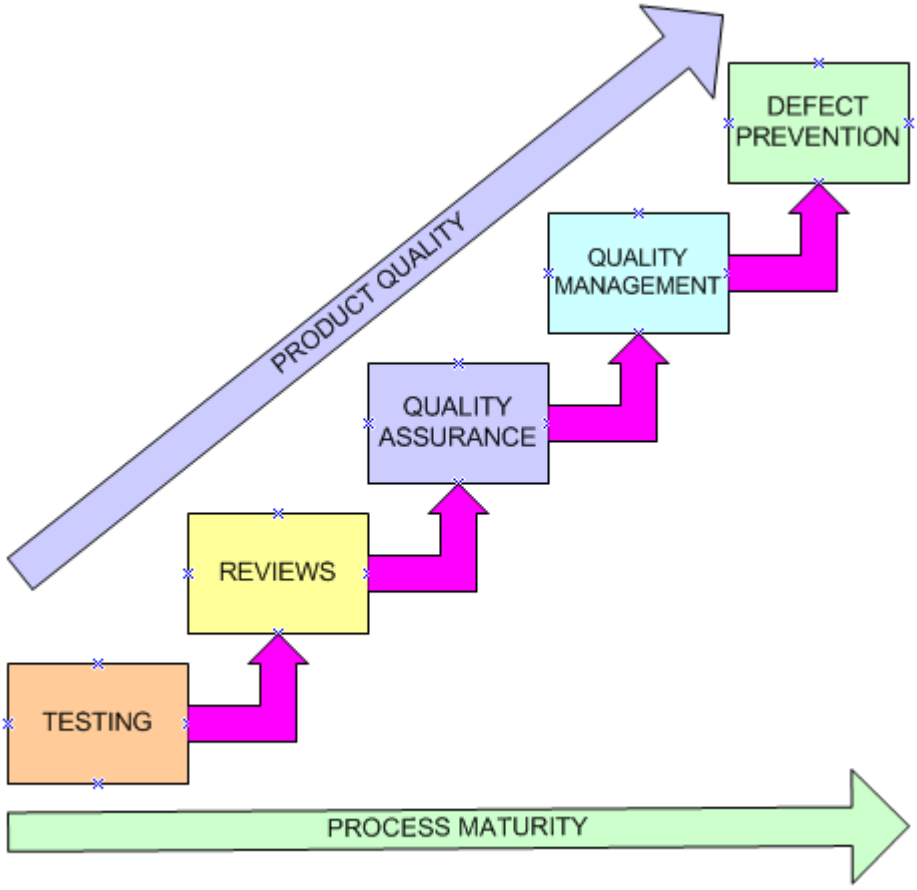
1. PPQA Implementation Phase 1 – **Existence/Completeness** of Artifacts

    - Focus on completeness of existing artifacts
    - Reviews conducted by members of the DTMB PPQA Team
    - Reviews may be conducted at any stage of the lifecycle
    - Reviews encompass all applicable SUITE artifacts

2. PPQA Implementation Phase 2 – **Quality** of Artifacts

    - Focus on quality of content of complete artifacts
    - Reviews conducted by members of the DTMB PPQA Team
    - Reviews may be conducted at any stage of the lifecycle
    - Reviews encompass all SUITE artifacts

As the following diagram dictates, the more an organization matures its quality processes, the higher the quality of the developed products will be.



Product Quality Ramps Up as Processes Mature.

Section: **1.3 DTMB PPQA Team**

Description: Creation of a dedicated DTMB PPQA Team was critical to the overall success of not only the PPQA process but also the larger SUITE goal of reaching CMMI Maturity Level 3 compliance. The PPQA Team's initial task was to develop and implement PPQA processes. The team conducts Project Quality Assessment (PQA) reviews, and may eventually participate in CMMI self assessments, and appraisals following the Standard CMMI Appraisal Method for Process Improvement (SCAMPI). The PPQA Team provides guidance to bring deficient areas into SUITE compliance

PPQA team members must have a thorough understanding of SUITE processes, including both the PMM, the SEM, and supporting processes. PPQA team members should have completed all of the SUITE 101 workshops, as well as the three-day "Introduction to CMMI" course licensed by the Software Engineering Institute (SEI) and taught by SEI approved instructors, when offered. PPQA team members must have the ability to interact with people and communicate effectively, and must be detail oriented. Individuals who typically have the technical background, experience, and skills required to conduct PQA reviews include team managers, area managers, project managers, project leaders, and quality assurance representatives.

Proper maturity of the PPQA processes described in this manual assumes that the PPQA Team will be led by a full-time dedicated CMMI Process Area Specialist. This CMMI Process Area Specialist will also play a critical role in the CMMI Process Development Team, providing a link across these two teams. It is recommended that the CMMI Process Area Specialist completed all SUITE 101 workshops, the three-day "Introduction to CMMI" course, and the "Intermediate Concepts of CMMI" course. It is also assumed that the PPQA Team will be composed of 12 - 15 individuals from all areas of IT within DTMB, each team member devoting 8 hours per week to PPQA work.

Chapter: **2.0 PPQA Implementation: Phase 1 – Existence/Completeness of Artifacts**

Applicability: The focus of PPQA Phase 1 is to verify the existence and completeness of SUITE artifacts. **Completeness means that content exists and that a minimum level of information has been provided in each section or heading of the template.** This review is to assure stakeholders that documents, work products, and deliverables exist and are complete. The existence and completeness of SUITE artifacts is an indirect indicator that SUITE processes are being followed.

Stakeholders: The key stakeholders of the process are those individuals or organizations that use the output of this process. Key stakeholders include:

- Project Manager of the project under review
- Local DTMB managers
- SUITE Support Team members who need this feedback for validating methodology requirements
- SUITE Core Team
- SUITE Sponsors
- Software Engineering Process Group (SEPG)

Scope: The PPQA process begins with scheduling the PQA review and ends with delivery of the reports that are produced after the review.

Scheduling the Review: The PPQA Admin uses the *SEM Implementation Progress Report* to select projects for review. The PPQA Admin is responsible for selecting at least one project per application maintenance/development team to review.

The PQA Team Lead is responsible for scheduling the review. The PQA Team Lead and Project Manager agree on the date for a Kick-Off meeting, artifacts to be reviewed, dates for the review, and the date for a Close-Out meeting.

The Project Manager provides the following information to the DTMB PQA Team Lead prior to the Kick-Off meeting:

- Project name
- Project Charter
- Most recent project status report
- List of completed and pending Stage Exits

In order to allow teams to become familiar with SUITE processes and to promote learning the methodology prior to a PQA review, it is recommended that the project team complete at least one SEM project prior to the first PQA review.

Suppliers: The Project Manager or Team Supervisor supplies copies of the artifacts or designates where the documents are filed as hardcopy or electronically. Electronic copies must show an indication of who the approval parties are.

Who Conducts: Reviews are conducted by select members of the DTMB PPQA Team, called a PQA Review Team. To maintain objectivity in these reviews, the review team includes only individuals that have not had input to the artifacts under review.

Input: The actual list of artifacts to be reviewed is determined by the PQA Team Lead, based on information provided by the Project Manager prior to the assessment review. A list of these documents, by PMM/SEM type (large project using full SEM; other projects using the full PMM/SEM; and projects using PMM/SEM Express) are included in Appendix A.

Initial Outputs: The PQA process includes the identification, communication, and resolution of methodology compliance or, if present, noncompliance issues. The PQA Review tracks if and when artifacts deviate from the recommended list. The PQA Review also tracks circumstances for the deviation if presented during the review. A Quality Assessment Report is prepared for the Project Manager which details the results of the review and specifies any non-compliance issues that need resolution.

Typical records produced by the PQA review process include:

- PQA Checklists (identification of compliance and non-compliance issues)
- Quality Assessment Report (communication to the Project Manager)

Templates for the PQA Checklists and the Quality Assessment Report are included in this process manual.

Close-Out Meeting: Following review of the Quality Assessment Report, the PQA Team Lead convenes the Close-Out Meeting with the Project Manager, Team Supervisor, and other interested stakeholders. The PQA Team Lead reviews the Quality Assessment Report, highlighting any areas of non-compliance that require a response from the Project Manager.

Non-Compliance Resolution: If non-compliance issues are identified during the review and identified in the Quality Assessment Report, the Project Manager must provide a written response to the PQA Team Lead regarding the non-compliance. The Project Manager must either provide a logical justification for the non-compliance issue or develop an action plan to resolve each issue. This information is documented by updating the appropriate section on the Quality Assessment Report and returning it to the PQA Team Lead.

Chapter: **3.0 PPQA Implementation: Phase 2 – Quality of Artifacts**

Applicability: The focus of PPQA Phase 2 is to elevate the level of review above existence/completeness (Phase 1) to quality of the content of the artifacts. The reviews in Phase 2 encompass all SUITE artifacts, including PMM Express/SEM Express, full and tailored PMM/SEM, and abbreviated documentation for small maintenance efforts. **A PQA review of quality verifies that content of the artifacts is logical and rational. Reviewers make judgments about the quality and validity of the artifacts.** This is a review to assure stakeholders that documents, work products, and deliverables not only exist and are constructed following the methodology templates, but also that the content entered in each section of the template is valid.

Stakeholders: The key stakeholders of the process are those individuals or organizations that use the output of this process. Key stakeholders include:

- Project Manager of the project under review
- Local DTMB managers
- SUITE Support Team members who need this feedback for validating methodology requirements
- SUITE Core Team
- SUITE Sponsors
- Software Engineering Process Group (SEPG)

Scope: The PPQA process begins with scheduling the review and ends with delivery of the reports that are produced after the review.

Scheduling the Review: The PPQA Admin uses the *SEM Implementation Progress Report* to select projects for review. The PPQA Admin is responsible for selecting at least one project per application maintenance/development team to review.

The PQA Team Lead is responsible for scheduling the review. The PQA Team Lead and Project Manager agree on the date for a Kick-Off meeting, artifacts to be reviewed, dates for the review, and the date for a Close-Out meeting.

The Project Manager provides the following information to the DTMB PQA Team Lead prior to the Kick-Off meeting:

- Project name
- Project Charter
- Most recent project status report
- List of completed and pending Stage Exits

A Kick-Off meeting and a Close-Out meeting are required, but the review itself does not require meetings among all involved parties.

Suppliers: The Project Manager or Team Supervisor supplies copies of the artifacts or designates where the documents are filed as hardcopy or electronically.

Who Conducts: Reviews are conducted by members of the DTMB PPQA Team.

Input: The actual list of artifacts to be reviewed is determined by the PQA Team Lead, based on information provided by the Project Manager prior to or during the Kick-Off meeting.

See Appendix A for a list of documents generally required for PMM/SEM and PMM/SEM Express.

Initial Outputs: The PQA process includes the identification, communication, and resolution of methodology compliance or, if present, noncompliance issues. The PQA review tracks if and when artifacts deviate from the recommended list. The PQA review also tracks circumstances for the deviation if presented during the review. A Quality Assessment Report is prepared for the Project Manager which details the results of the review and specifies any non-compliance issues that need resolution. Before the Quality Assessment Report is delivered to the Project Manager, the DTMB PPQA Team may conduct a review of the report to ensure its accuracy, objectivity, and professionalism.

Typical records produced by the PQA review process include:

- PQA Checklists (identification of compliance and non-compliance issues)
- Quality Assessment Report (communication to the Project Manager)

Templates for the PQA Checklists and the Quality Assessment Report are available in the appendices.

Close-Out Meeting: Following review of the Quality Assessment Report, the PQA Team Lead convenes the Close-Out Meeting with the Project Manager, Team Supervisor, and other interested stakeholders. The PQA Team Lead reviews the Quality Assessment Report, highlighting any areas of non-compliance that require a response from the Project Manager.

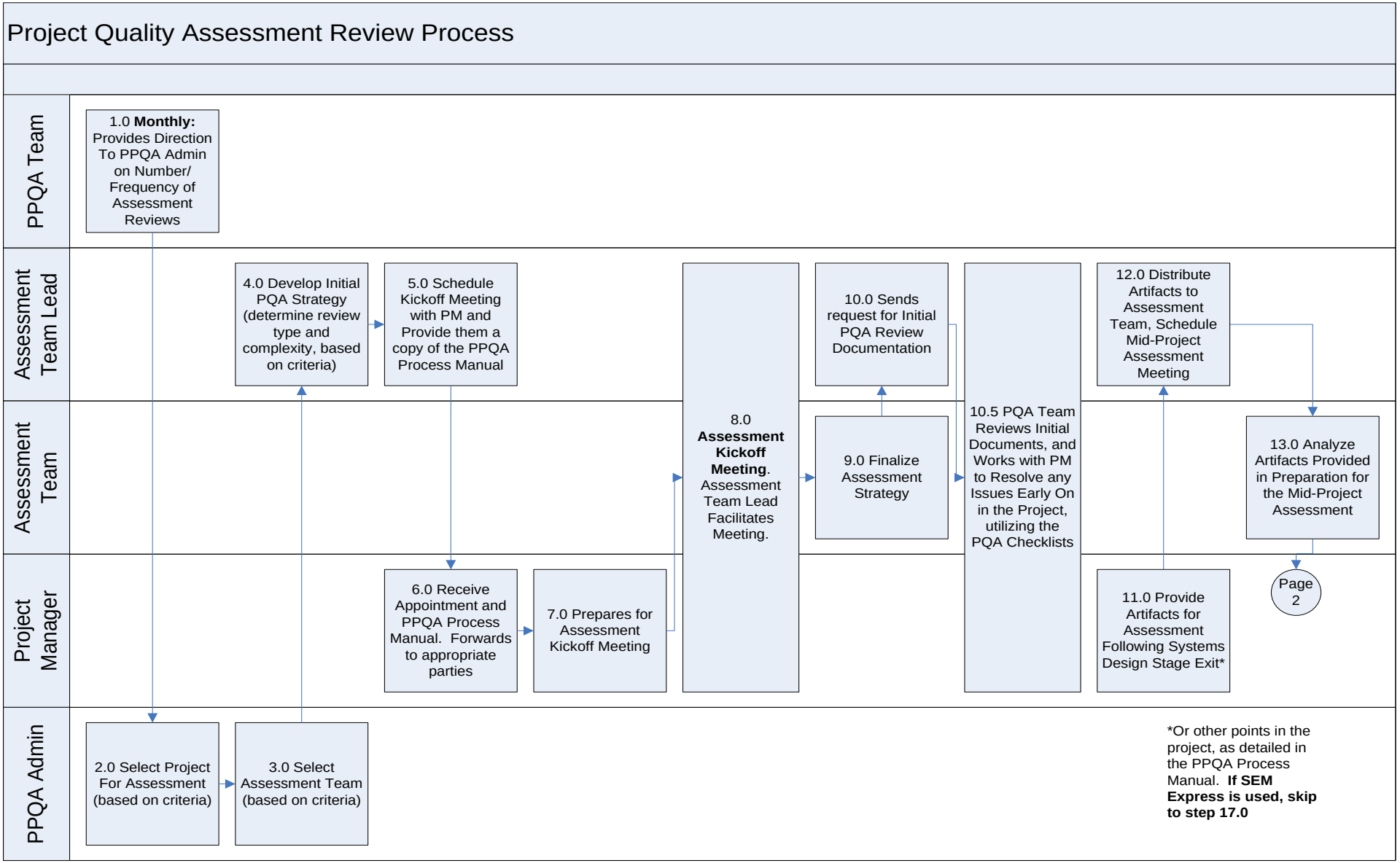
Non-Compliance Resolution: If non-compliance issues are identified during the review and identified in the Quality Assessment Report, the Project Manager must provide a written response to the PQA Team Lead regarding the non-compliance. The Project Manager must either provide a logical justification for the non-compliance issue or develop an action plan to resolve each issue. This information is documented by updating the appropriate section on the Quality Assessment Report and returning it to the PQA Team Lead.

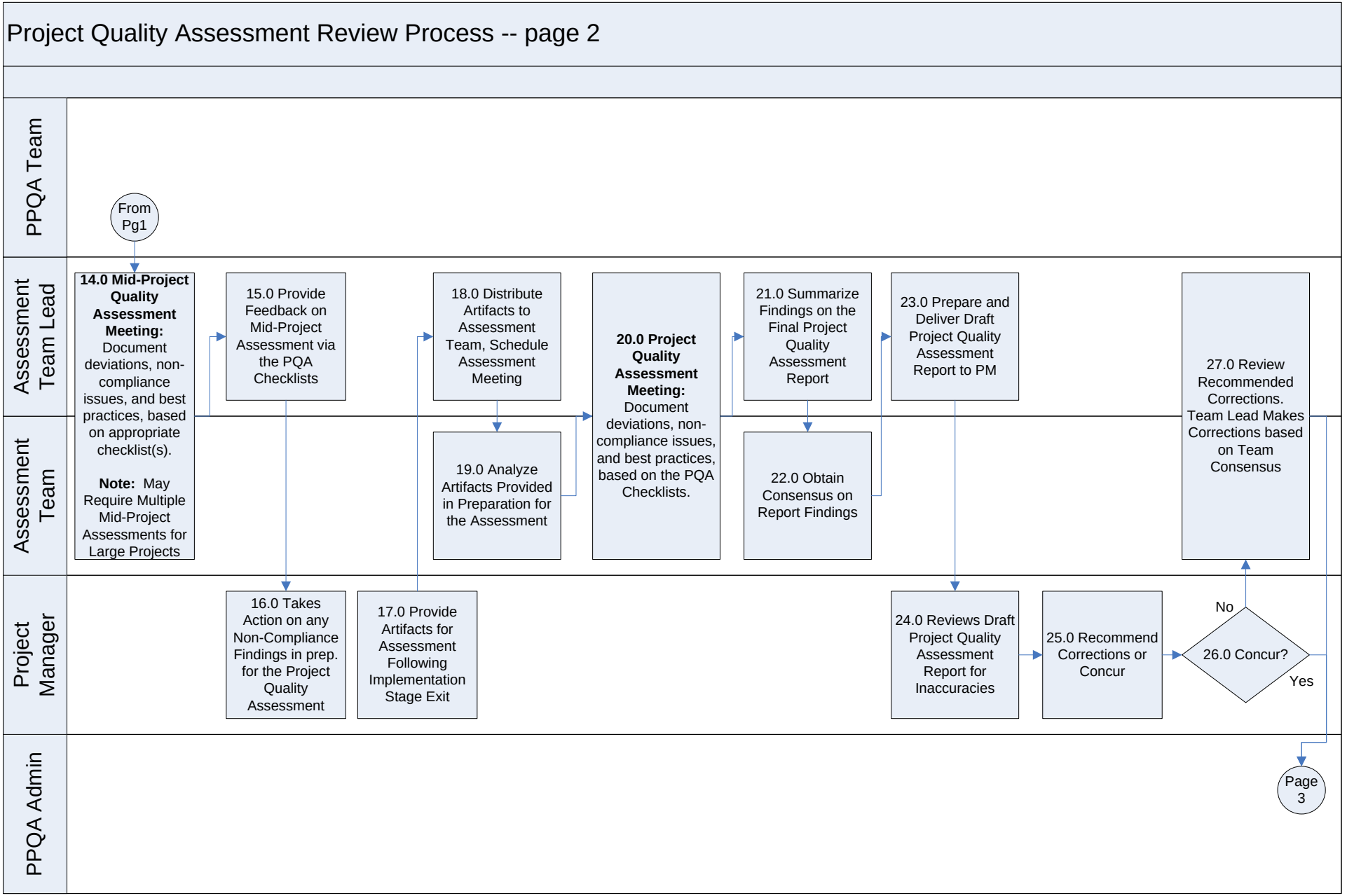
Chapter: **4.0 PPQA Process Flows and Procedures**

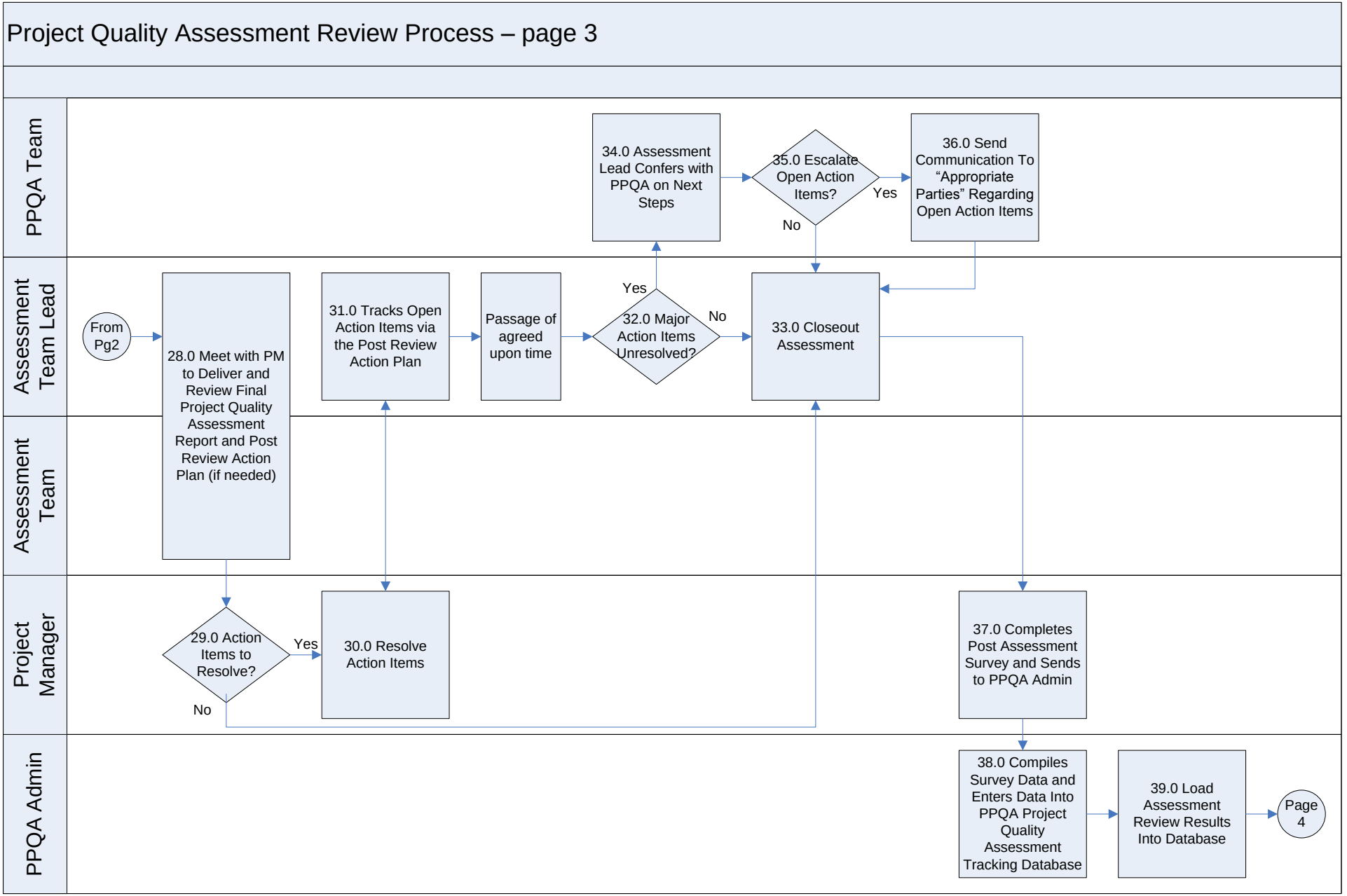
Description: This chapter details the Process and Product Quality Assurance Team Process Flows and Procedures. Section 4.1 of this chapter depicts the PPQA Process Flows. These Process Flows map directly to the accompanying PPQA Procedures that are contained in Section 4.2.

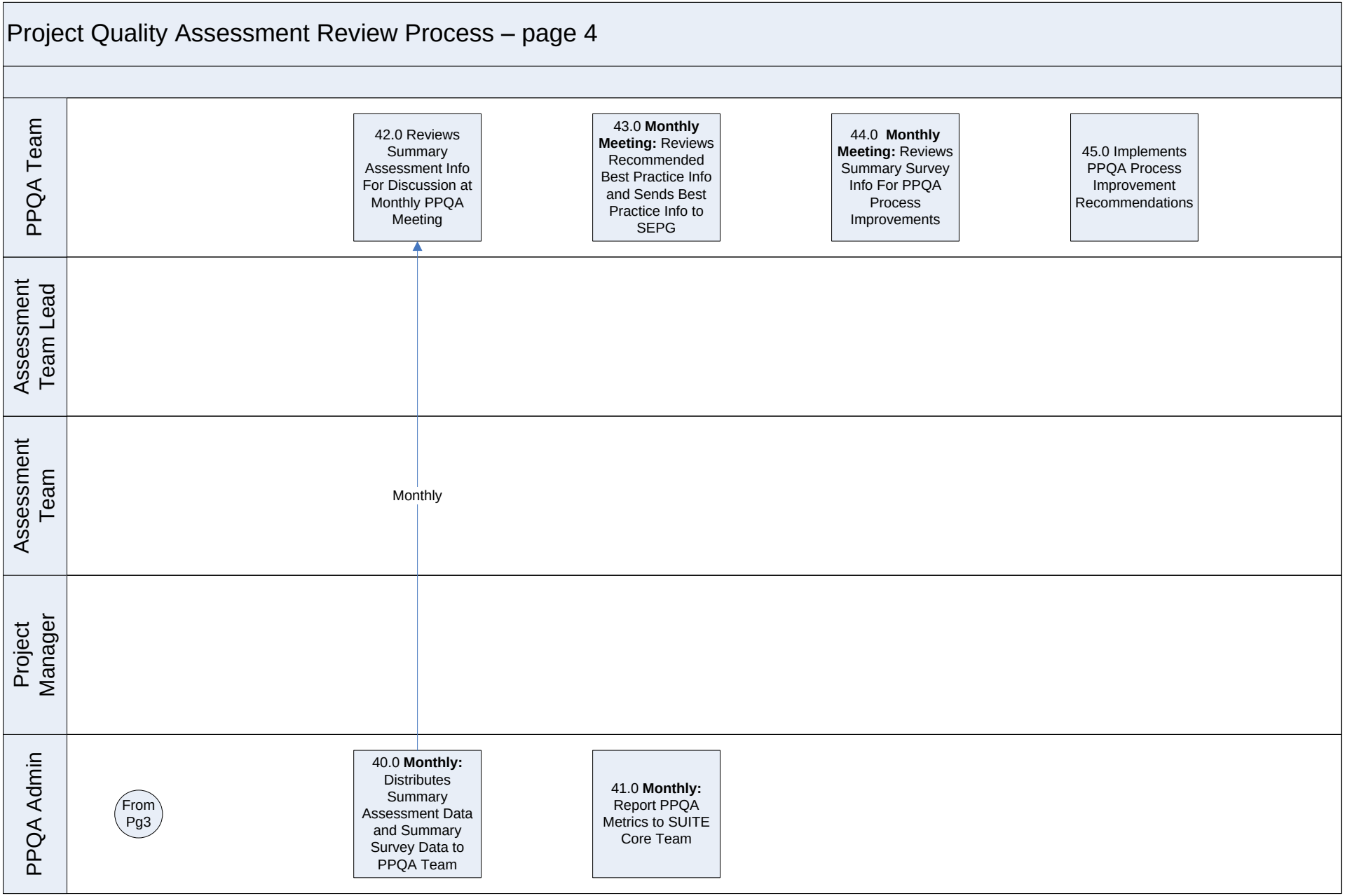
Numbering within each process flow box corresponds to a paragraph in the PPQA Procedures

Section: **4.1 PPQA Process Flows**




Project Quality Assessment Review Process -- page 2
PPQA Team
Assessment Team Lead
Assessment Team
Project Manager
PPQA Admin
From Pg1
14.0 Mid-Project Quality Assessment Meeting: Document deviations, non-compliance issues, and best practices, based on appropriate checklist(s).
Note: May Require Multiple Mid-Project Assessments for Large Projects
15.0 Provide Feedback on Mid-Project Assessment via the PQA Checklists
16.0 Takes Action on any Non-Compliance Findings in prep. for the Project Quality Assessment
17.0 Provide Artifacts for Assessment Following Implementation Stage Exit
18.0 Distribute Artifacts to Assessment Team, Schedule Assessment Meeting
19.0 Analyze Artifacts Provided in Preparation for the Assessment
20.0 Project Quality Assessment Meeting: Document deviations, non-compliance issues, and best practices, based on the PQA Checklists.
21.0 Summarize Findings on the Final Project Quality Assessment Report
22.0 Obtain Consensus on Report Findings
23.0 Prepare and Deliver Draft Project Quality Assessment Report to PM
24.0 Reviews Draft Project Quality Assessment Report for Inaccuracies
25.0 Recommend Corrections or Concur
26.0 Concur?
No
Yes
27.0 Review Recommended Corrections. Team Lead Makes Corrections based on Team Consensus
Page 3


Project Quality Assessment Review Process – page 3
PPQA Team
Assessment Team Lead
Assessment Team
Project Manager
PPQA Admin
From Pg2
28.0 Meet with PM to Deliver and Review Final Project Quality Assessment Report and Post Review Action Plan (if needed)
31.0 Tracks Open Action Items via the Post Review Action Plan
Passage of agreed upon time
32.0 Major Action Items Unresolved?
Yes
No
34.0 Assessment Lead Confers with PPQA on Next Steps
35.0 Escalate Open Action Items?
Yes
No
36.0 Send Communication To "Appropriate Parties" Regarding Open Action Items
33.0 Closeout Assessment
29.0 Action Items to Resolve?
Yes
No
30.0 Resolve Action Items
37.0 Completes Post Assessment Survey and Sends to PPQA Admin
38.0 Compiles Survey Data and Enters Data Into PPQA Project Quality Assessment Tracking Database
39.0 Load Assessment Review Results Into Database
Page 4


Project Quality Assessment Review Process – page 4
PPQA Team
Assessment Team Lead
Assessment Team
Project Manager
PPQA Admin
42.0 Reviews Summary Assessment Info For Discussion at Monthly PPQA Meeting
43.0 Monthly Meeting: Reviews Recommended Best Practice Info and Sends Best Practice Info to SEPG
44.0 Monthly Meeting: Reviews Summary Survey Info For PPQA Process Improvements
45.0 Implements PPQA Process Improvement Recommendations
Monthly
From Pg3
40.0 Monthly: Distributes Summary Assessment Data and Summary Survey Data to PPQA Team
41.0 Monthly: Report PPQA Metrics to SUITE Core Team

Section: **4.2 PPQA Procedures**

1.0 **Monthly:** The PPQA Team provides the PPQA Administrative Assistant direction on the number of projects to select for Project Quality Assessments based on current workloads and backlogs of the individual PPQA team members. This occurs during the monthly PPQA Team Meeting, and whenever a PPQA team member feels they are overloaded. Each PPQA team member must inform the PPQA Administrative Assistant when they feel they have reached their limit as far as PPQA Project Quality Assessment work.

The PPQA Administrative Assistant prepares the agenda for the Monthly PPQA Team Meeting.

2.0 The PPQA Administrative Assistant selects a project for a Project Quality Assessment based on the following factors:
- **Project Size** – Need a good mix of projects of different sizes, instead of all large, all medium, or all small projects.
- **Full SEM, SEM Express, or Tailored** – Need a good mix of SEM types, instead of all SEM Express, or all full SEM projects.
- **Equal mix of CSD areas** – Need to evenly distribute the reviews, ensuring that projects are reviewed in each of the Client Service Directors areas.
- **Equal mix of Project Managers within the CSD** areas – Need to make sure that all Project Managers are a part of the Project Quality Assessment process, not just the star players within each CSD area.
- **The project has recently completed an Initiation and Planning Stage Exit** (or an Initiation, Requirements, and Design stage exit for an SEM Express project) – so that we can set up the assessment kickoff meeting in a timely manner.

The PPQA Administrative Assistant will strive to ensure that there is a good mix of active Project Quality Assessments, based on the above factors.

The PPQA will accept requests from Client Service Directors (CSDs) to assess projects in their area as resources permit.

Initially, the list of projects that the PPQA Administrative Assistant will select projects will come from the SUITE Metrics Repository, which currently lists all active projects that are using SUITE processes. The goal is to eventually select projects from a list of all systems-related projects.

3.0 The PPQA Administrative Assistant selects the Project Quality Assessment Team based on the following factors:
- **Team member not a part of that CSD area** – To prevent any type of bias, pressure, or other non-desirable effects of having a person review a project from their own area. A PPQA team member may also be excused from participating in reviews from one or more additional CSD areas if they feel there may be a bias or other non-desirable circumstances. The PPQA Administrative Assistant will maintain this list.
- **Rotate team members** – Distributing them evenly, ensuring that they get to all other CSD areas before returning

Criteria for determining assessment team size:
- **Small Project** (under 1000 hours, typically using SEM Express) 2 team members
- **Medium Project** (1000 to 2500 hours, typically using Full SEM) 3 team members
- **Large Project** (over 2500 hours) 4 team members

The PPQA Administrative Assistant selects the Assessment Team Lead based on a rotating schedule, maintaining information on how many Project Quality Assessments each PPQA team member has lead and is currently leading.

The PPQA Administrative Assistant enters this information into the PPQA Project Quality Assessment Tracking Spreadsheet on SharePoint.

4.0 The Assessment Team Lead develops the initial Project Quality Assessment Strategy. This assessment strategy, which includes the standard packet of materials included in the PPQA Process Manual, is sent to the Project Manager prior to the assessment kickoff meeting. The factors listed above (Project selection criteria and Project Quality Assessment Team criteria) are integrated into the PPQA Process Manual, giving the Project Manager a better idea of the assessment process prior to the kickoff meeting.

5.0 The Assessment Team Lead contacts the Project Manager and notifies him/her (typically via email) that a Project Quality Assessment will be conducted and that a kickoff meeting will be scheduled in the near future. The Client Services Director (or equivalent), the SUITE Support Team (SST) Lead, and the Agency Information Officer (or equivalent) should also be copied on this notice. The Assessment Team Lead sends any relevant materials to the Project Manager.

If the Project Manager feels they should be exempt from a Project Quality Assessment, they must obtain this exemption, in writing, from their Agency Information Officer (or equivalent). If an exemption is granted, the PPQA Administrative Assistant records this information in the PPQA Project Quality Assessment Tracking Spreadsheet on SharePoint.

6.0 The Project Manager receives the kickoff meeting appointment and reviews the PPQA Process Manual in preparation for the kickoff meeting. The Project Manager delegates this appointment to others on the project team that needs to be involved in the assessment. Possible candidates include quality assurance manager/team members; team leads; assistant Project Manager(s); agency Project Manager; contract-side Project Manager(s); etc. The SUITE Support Team Lead for your area should also be invited, as well as other relevant SST members, such as the person responsible for quality assurance. The Project Manager also forwards the PPQA Process Manual and any supporting materials to these individuals.

7.0 The Project Manager (and his/her team) review the PPQA Process Manual, and makes available initial documents for the Project Quality Assessment Team, including artifacts such as the Project Charter, Project Plan, Project Schedule, and other project related data that is (or will be) available for the kickoff meeting.

The Project Manager, based on the standard Project Quality Assessment timetable and their

project milestones, will give the assessment team an idea when they will be ready for the assessment(s), based on the preliminary assessment strategy.

8.0 **Assessment Kickoff Meeting.** This meeting is scheduled to provide/set expectations for the stakeholders that will be participating in the assessment. The Assessment Team Lead will facilitate this meeting, explaining the assessment process – communicating processes that have significantly changed since a previous assessment with this Project Manager. The Assessment Team Lead will go through the entire process if this is the first assessment for this Project Manager and his/her team, stressing what artifacts are needed for the assessment.

The Assessment Team will request that the artifacts be provided by the Project Manager at the appropriate times. Electronic copies of the artifacts are preferred. Some areas have automated system development lifecycle tools, which may facilitate paper-only artifacts for the Assessment Team to review.

The Assessment Team Lead will emphasize that this process is a value add, with the intent of offering up advice, mentoring, best practices or other resources (such as training recommendations) that may be of value to the project team. The Assessment Team Lead emphasizes that we are also looking for best practices that the project team are using that can potentially be shared with other project teams and/or integrated into the SUITE processes.

9.0 The Assessment Team will finalize the Project Quality Assessment Strategy, including adding ticklers to their calendars as to when each successive review is to be scheduled, based on the project's schedule. This effort is facilitated by the Assessment Team Lead.

10.0 The Assessment Team Lead sends a request for the initial PQA review documentation.

10.5 PQA Team reviews initial documents, and works with the PM to resolve any issues early on in the project.

11.0 The Project Manager provides relevant artifacts to the Assessment Team Lead at the conclusion of the Systems Design Stage Exit, or at other points in the project, as discussed at the Assessment Kickoff Meeting. **If using SEM Express, steps 11.0 through 16.0 are typically skipped, as a Mid-Project Assessment is not needed for an SEM Express Project, as the first stage exit covers Initiation & Planning, Requirements Definition, Functional Design and System Design.**

12.0 If the Project Quality Assessment Team Lead determines that all of the needed artifacts are present, they forward those artifacts sent by the Project Manager to the entire Assessment Team. The Assessment Team Lead schedules the Mid-project Quality Assessment Meeting not less than 5 business days out, but as soon as possible thereafter, based on calendar availability.

If all artifacts are not present, the Assessment Team Lead contacts the Project Manager to obtain the missing artifacts, prior to sending the artifacts on to the Assessment Team.

13.0 The Project Quality Assessment Team reviews the artifacts prior to the Mid-project Quality Assessment Meeting in preparation for the review.

14.0 **Mid-Project Quality Assessment Meeting**. The Project Quality Assessment Team Lead facilitates this meeting. The team, using the supplied artifacts, identifies and documents deviations, non-compliance issues and best practices, based on information in the appropriate checklist(s). If the appropriate checklist(s) does not exist, the team can create a tailored checklist to accommodate the Project Quality Assessment process.

During the Project Quality Assessment Meeting, the Assessment Team Lead documents all issues, deficiencies, and best practices identified by the Project Quality Assessment Team.

During the Project Quality Assessment Meeting, the team will devise a plan, if needed, to offer the Project Manager mentoring or other available resources to help better their usage of SUITE processes. Such resources might include the SUITE 101 Workshops; putting the Project Manager in contact with another, more experienced Project Manager; invitations to well-run Structured Walkthrough meetings; invitations to well-run Stage Exit meetings, etc.

The Project Manager shall take corrective action, if/as needed, to address and correct any non-compliance findings.

15.0 The Project Quality Assessment Team Lead provides feedback to the Project Manager following the Mid-Project Assessment.

16.0 The Project Manager takes action, if needed, on any non-compliance findings from the Project Quality Assessment Meeting.

17.0 The Project Manager provides relevant artifacts to the Assessment Team Lead, in preparation for the Project Quality Assessment, following the Implementation Stage Exit.

18.0 If the Project Quality Assessment Team Lead determines that all of the needed artifacts are present, they forward those artifacts sent by the Project Manager to the entire Assessment Team. The Assessment Team Lead schedules the Project Quality Assessment Meeting not less than 5 business days out, but as soon as possible thereafter, based on calendar availability.

If all artifacts are not present, the Assessment Team Lead contacts the Project Manager to obtain the missing artifacts, prior to sending the artifacts on to the Assessment Team.

19.0 The Project Quality Assessment Team reviews the artifacts prior to the Project Quality Assessment Meeting in preparation for the review.

20.0 **Project Quality Assessment Meeting**. The Project Quality Assessment Team Lead facilitates this meeting. The team, using the supplied artifacts, identifies and documents deviations, non-compliance issues and best practices, based on information in the appropriate checklist(s). If the appropriate checklist(s) does not exist, the team can create a tailored checklist to accommodate the Project Quality Assessment process.

During the Project Quality Assessment Meeting, the Assessment Team Lead documents all issues, deficiencies, and best practices identified by the Project Quality Assessment Team.

The Project Quality Assessment Team will assign a rating for the Project Quality Assessment. This rating is based on the number of non-compliance findings, based on the checklist(s) used for the review.

During the Project Quality Assessment Meeting, the team will devise a plan, if needed, to offer the Project Manager mentoring or other available resources to help better their usage of SUITE processes. Such resources might include the SUITE 101 Workshops; putting the Project Manager in contact with another, more experienced Project Manager; invitations to well-run Structured Walkthrough meetings; invitations to well-run Stage Exit meetings, etc.

21.0 The Project Quality Assessment Team Lead summarizes the findings and validates the initial rating. The instructions for assigning an assessment rating are documented on the Project Quality Assessment Report.

The Project Quality Assessment Team Lead will structure the summary comments in a way that will first show all of the good things that the project has been doing, and then list the areas that need improvement, and finally noting the need for developing an action plan to address deficiencies, if needed. All major deficiencies will need an actionable response.

22.0 The Project Quality Assessment Team Lead sends the initial Project Quality Assessment Report to the Project Quality Assessment Team for their consensus on the summarized findings. Assessment Team members shall have 2 business days to suggest corrections/changes to the Project Quality Assessment Report, prior to the Project Quality Assessment Team Lead forwarding the Project Quality Assessment Report to the Project Manager.

23.0 The Assessment Team Lead will then make the suggested changes and re-send to the Assessment Team. The Assessment Team Lead will then send the draft Project Quality Assessment Report to the Project Manager for his/her review.

24.0 The Project Manager will review the draft assessment findings for inaccuracies that may have been overlooked during the assessment.

25.0 /

26.0 The Project Manager will contact the Project Quality Assessment Team Lead with any needed corrections/questions/comments on the initial findings. The Project Manager shall have 3 business days to notify the Project Quality Assessment Team Lead, in writing, as to needed corrections or concurrence on the findings contained in the Project Quality Assessment Report.

27.0 If the Project Manager has recommended changes to the draft Project Quality Assessment Report, the Project Quality Assessment Team Lead will schedule a meeting with the Assessment Team to review and take action on these proposed changes. The Project Quality Assessment Team Lead will send these recommended changes to the Assessment Team prior to the meeting, if possible.

The Project Quality Assessment Team Lead will then make any needed corrections to the Project Quality Assessment Report.

28.0 The Project Quality Assessment Team Lead will schedule a meeting with the Assessment Team and the Project Manager to review the final Project Quality Assessment Report. The Project Quality Assessment Team Lead will facilitate this meeting, focusing first on the good things, such as unique best practices that the project is doing with regard to SUITE-related processes. The Assessment Team then will discuss any deviations/discrepancies found.

The Assessment Team discusses, in detail, any best practices found that may be candidates for sharing with other project teams and/or incorporating them into the SUITE processes.

The Assessment Team will also offer resources (such as mentoring, sample "best practice" documents, and invitations to well-run Structured Walkthrough / Stage Exit meetings) as part of the corrective action plan to help educate the Project Manager and other project team members on the correct usage of SUITE processes.

If there are no follow up action items on the Project Quality Assessment Report, this signals the completion and closeout of the Project Quality Assessment process. The exception to this is when the Project Quality Assessment includes multiple reviews, which may be the case with a large project. In this case, the Project Manager will continue managing the project and send the appropriate artifacts to the Assessment Team at the appropriate times.

29.0 If there are deficiencies that need to be acted upon, the Project Manager and the Assessment Team Lead develops an action plan to address any actionable deficiencies.

30.0 The Project Manager resolves any outstanding action items and reports progress to the Assessment Team Lead.

31.0 The Project Quality Assessment Team Lead tracks all open action items (issues / deviations) from the Project Manager. The Project Quality Assessment Team Lead contacts the Project Manager at agreed upon intervals to check status of any open action items.

32.0 The Project Quality Assessment Team Lead monitors major open action items that have not been resolved in a judicious and timely manner.

33.0 If no major open action items exist, the Project Quality Assessment Team Lead closes out the assessment, with concurrence from the Assessment Team, and notifies the Project Manager of this action. The Assessment Team Lead sends the final Project Quality Assessment Report to the PPQA Administrative Assistant to update the PPQA Project Quality Assessment Tracking Spreadsheet on SharePoint. The final Project Quality Assessment Report is also sent to the entire PPQA Team for their information and possible discussion at the monthly PPQA Team Meeting.

The Assessment Team Lead will also send the Project Manager a copy of the Assessment Survey and ask that they return it, when completed, to the PPQA Administrative Assistant within 5 business days.

The exception to closing the Project Quality Assessment is when the Project Quality Assessment

includes multiple reviews, which may be the case with a large project. In this case, the Project Manager will continue managing the project and send the appropriate artifacts to the Assessment Team at the appropriate times.

34.0 If there are major open action items that are not being resolved, the Assessment Team Lead forwards this info to the broader PPQA Team for discussion at the next monthly PPQA Team Meeting. If the Assessment Team Lead feels that there needs to be expedited action taken, s/he will seek virtual concurrence on whether or not to escalate the open action items.

35.0 The PPQA Team will make a decision whether or not to escalate the open action items.

36.0 The PPQA Team will send communication to the appropriate parties regarding the unresolved major action items.

The Assessment Team Lead will continue to track the open action items, and close the assessment when s/he feels it is appropriate, with concurrence from the Assessment Team and/or the PPQA Team. When the assessment is closed, the Assessment Team Lead will send notification of this action to the Project Manager and the PPQA Administrative Assistant. The final Project Quality Assessment Report is also sent to the entire PPQA Team for their information and possible discussion at the monthly PPQA Team Meeting.

The Assessment Team Lead will also send the Project Manager a copy of the Assessment Survey and ask that they return it, when completed, to the PPQA Administrative Assistant within 5 business days.

The exception to closing the Project Quality Assessment is when the Project Quality Assessment includes multiple reviews, which may be the case with a large project. In this case, the Project Manager will continue managing the project and send the appropriate artifacts to the Assessment Team at the appropriate times.

37.0 The Project Manager completes the Assessment Survey in an effort to give feedback as to the quality and value of the Project Quality Assessment process. The Project Manager completes this survey within 5 business days of receipt and returns it to the PPQA Administrative Assistant.

38.0 The PPQA Administrative Assistant receives the completed Assessment Surveys from the Project Manager and compiles summary information.

39.0 The PPQA Administrative Assistant enters assessment review information from the finalized Project Quality Assessment document into the PPQA Project Quality Assessment Tracking Spreadsheet on SharePoint, changing the status of the assessment to "closed."

40.0 The PPQA Administrative Assistant distributes assessment summary information to the PPQA Team prior to the monthly PPQA Team Meeting.

41.0 The PPQA Administrative Assistant compiles PPQA metrics information, and distributes to the SUITE Core Team on a monthly basis, generally after the monthly PPQA Meeting.

42.0 PPQA team members, prior to the Monthly PPQA Team Meeting, reviews summary project quality assessment information and summary survey information and prepare discussion items for the meeting.

Each PPQA Team Member who has had the role of Project Quality Assessment Team Lead on an assessment during the past month will give an update on those assessments at the monthly PPQA Team Meeting.

43.0 PPQA team members review, and take action on, best practice information discovered during the assessments that took place over the previous month. The PPQA Team sends best practice recommendations to the Systems Engineering Process Group (SEPG) for their possible inclusion into the SUITE processes.

44.0 As part of the Monthly PPQA Team Meeting, the PPQA Team reviews summary survey information for potential PPQA process improvements.

45.0 PPQA Lead, along with the PPQA Team implements PPQA Process Improvements, based on experiences, survey information, and SUITE process changes.

Chapter: **5.0 Project Quality Assessment Preparation and Planning**

Description: In preparation for a PQA Review, the PQA Team should strategize and prepare for the review. The following sub-sections will aid the team in this preparation.

A. PQA Introduction Email Message Format
B. PQA Kickoff Meeting Agenda
C. Mid-Project Quality Assessment Meeting Agenda
D. Post-Project Quality Assessment Meeting Agenda
E. Sending Documents to the PPQA Document Library
F. Questions to be Asked Prior to the Mid-Project Review
G. Questions to be Asked Prior to the Post-Project Assessment
H. Resources for the Project Quality Assessment
I. Expectations of PQA Stakeholders
J. Typical Artifacts Expected for the Assessment

A. PQA Introduction Email Message Format

It is recommended that you use the following format to send the Project Manager an introduction email. It is also recommended to call the pProject Manager on the phone prior to sending this message.

>>>
Hi <Name(s), including PM, QA person, and others, as appropriate>,

I am e-mailing you today to let you know your "<Project Name>" has been selected for a SUITE Product Quality Assessment (PQA) Review. This review will involve me and two other members (team member names) of the Process and Product Quality Assessment (PPQA) Team reviewing the artifacts for your project.

The attached document explains the process and objectives for this review. Please take a few minutes to look over the attached PPQA Process Manual. This document this will give you some insight as to what the PQA team will be looking to review, as well as what to expect from our PQA Team.

I will be sending you an appointment for a quick kickoff meeting. The purpose of this meeting is for introductions; to ask a few questions regarding your project; and go over our PQA Review strategy.

To help our team acquaint ourselves with your project, if you could have the Project Manager provide the following information to the DTMB PQA Team Lead, <PQA Lead's name>, prior to the Kick-Off meeting:

- Project Charter
- Most recent project status report
- List of completed and pending Stage Exits

Please feel free to forward that appointment to anyone else you wish to include in the review for this initial meeting. Also, if you need the kickoff meeting rescheduled, please contact me.

Thank you. The PQA team values your willingness to work together on these project reviews!

Regards,
<PQA Lead's name>

CC: <Client Service Director>
>>

B. PQA Kickoff Meeting Agenda

Below is a typical PQA Kickoff Meeting agenda. This agenda may vary based on the number of PQAs the Project Manager has participated in as the PM.

Project Quality Assessment
Kickoff Meeting Agenda
<Project Name>
<Date>

<u>Agenda Items</u>

1. Introductions (Project Quality Assessment Team / Project Team Members / Other Attendees)

2. Explanation of Project Quality Assessment Process and Expected Benefits
   a. Have you attended the SUITE 101 Workshop on Project Quality Assessments?
   b. Is this your first PQA Review? If not, how many reviews have you gone through?

3. High-Level Overview of the project being reviewed

4. Review of Initial Project Quality Assessment Plan

5. Additional Questions for the Project Team

a. Does your office have a working Project Management Office in place? If so, what functions are performed?
b. Who is involved in scheduling your participants for structured walkthroughs and stage exits?
c. How large is this project in terms of effort hours, budget, and/or duration?
d. Are you using PMM, PMM Express or a tailored approach for this project?
e. Are you using SEM, SEM Express or a tailored approach for this project?
f. What project- and/or process-related tools are used on your project?
    i. Scheduling tools, Application Lifecycle Management (ALM) tools, issue tracking tools, etc.
g. How do you record document approvals – Actual signatures, or other means?
h. Has Business Continuity Planning discussions taken place, and if necessary, has the Business Application Criticality Request (DIT-208) been initiated?
i. Have there been any changes in project scope that would require the use of the Project Change Request (PMM-13)? If so, were the Project Plan and Schedule updated to relect the changes?
j. Has there been any project issues escalated that would require the use of the Project Issue document (PMM-15)?
k. Are there any contractors providing services for this project that are receiving payment based on providing deliverables (such as an RFP/ITB)? If so, what process is used to monitor this contract against the Statement of Work?
l. Can we get a copy of the project org chart, if it is not already included in the Project Charter?

6. Questions

7. Next Steps

C. Project Quality Assessment Meeting Agenda

Below is a typical PQA Mid-Project Quality Assessment Meeting agenda. This agenda may vary based on the number of PQA reviews planned for this project and other factors.

Project Quality Assessment
Mid-Project Review Meeting Agenda
<Project Name>

<Date>

Agenda Items

1. Introductions (Project Quality Assessment Team / Project Team Members / Other Attendees)

2. High-Level Review of the PQA Project Checklists

3. Detailed Review of the PQA Project Checklists
   a. Verification Items
   b. Findings
   c. Work Products and Processes Reviewed
   d. Additional Comments

4. Next Steps

5. Questions

D. Project Quality Assessment Meeting Agenda

Below is a typical PQA Post-Project Quality Assessment Meeting agenda.

Project Quality Assessment
Post-Project Review Meeting Agenda
<Project Name>
<Date>

Agenda Items

1. Introductions (Project Quality Assessment Team / Project Team Members / Other Attendees)

2. High-Level Review of the Project Quality Assessment Report

3. Detailed Review of the Project Quality Assessment Report
   e. Section 1: Findings
   f. Section 2: Observations
   g. Section 3: Summary

4. Next Steps

5. Questions

E. Sending Documents to the PPQA Document Library

Option 1: Email

1. Have the Project Manager send files to the following email address: PPQA@HCS084MOSSPW001.som.ad.state.mi.us.
2. The emailed files are grouped into folders by email sender (Project Manager) in the SUITE Project Quality Assessment Review Document Library. Note: Can only send inside SOM firewall.
3. There is a 3MB size limit per email sent

Option 2: Upload

1. PQA Lead creates folder in the "Project Quality Assessment Review Document Library".
   a. Go to the SUITE Team Site -- http://inside.michigan.gov/sites/dtmb/epmo-pmo/suite/default.aspx
   b. Click on the "Project Quality Assessment Review Document Library" link in the left navigation area
   c. Click drop down for "New" and select "New Folder"
   d. Format: <project name> - <project manager name>
      Ex: "CEPAS - Vaughn Bennett"
   e. Click "Ok"
2. PQA Lead gives the Project Manager "Contribute" permission
   a. Go back to the "Project Quality Assessment Review Document Library". This is the area that you can see all of the folders within the "Project Quality Assessment Review Document Library".
   b. Click on dropdown on folder name that you just created and select "Manage Permissions"
   c. Click drop down box for "New" and select "New Users"
   d. Look up the Project Manager by clicking the little book icon
   e. Under the "Give users permissions directly" click the "Contribute" security level
   f. Leave the box checked that sends the Project Manager the welcome message.
   g. Click "Ok"
3. Send the Project Manager the following instructions:
   a. Ask the Project Manager to verify they received the welcome message
   b. Project Manager:
      i. Click on the link within the email – as this will launch SharePoint
      ii. Validate that you are in the correct folder
      iii. Click the "Open" button

iv. Click on the "upload" drop down and select "Upload Multiple Documents"
v. Select the proper folder(s) and documents, then select "ok"
vi. Notify the PQA Lead that the documents have been uploaded. If all documents were not uploaded, give the PQA Lead an idea of when the remaining documents will be uploaded

F. Questions to be Asked Prior to the Mid-Project Assessment

1. Have any Change Requests occurred? If so:
   a. Were the Project Plan and Schedule updated?
   b. Were the stakeholders notified?
2. Any project issues escalated that would require the use of the Project Issue document (PMM-15)?
3. Any contractors? If so, are they being monitored against the Statement of Work?
4. Are configuration management activities (CM reviews, placing configuration items under CM, adhering to the set versioning scheme, maintaining baselines) for the project performed, tracked and updated, as per the Software Configuration Management Plan (SEM-302)?
5. Is there a completed Hosting Solutions (EA Solution Assessment) document for this system?
6. If required, is there a completed Infrastructure Services Request document?
7. If required, has an eMichigan Web Review Assessment been done?
8. Are the following documents under Configuration Management: Requirements Specification (SEM-402); Requirements Traceability Matrix (SEM-401); Hosting Solution; Infrastructure Services Request; Functional Design (SEM-501); Systems Design (SEM-604); Conversion Plan (SEM-601); Test Reports (SEM-603); and Test Plan (SEM-602)?

G. Questions to be Asked Prior to the Post-Project Assessment

1. Have any Change Requests occurred? If so:
   a. Were the Project Plan and Schedule updated to reflect the change?
   b. Were the stakeholders notified?
2. Was there any project issues escalated that would require the use of the Project Issue document (PMM-15)?
3. Any contractors? If so, were they monitored against the Statement of Work?
4. Have configuration management activities (CM reviews; placing configuration items under CM; adhering to the set versioning scheme;

maintaining baselines) been performed, tracked and updated, for the project as per the Software Configuration Management Plan (SEM-302)?

5. Have finalized documents from Initiation and Planning, Requirements Definition, System Design, Construction, and Testing stages above been reviewed and signed-off by key stakeholders?
6. Have the following documents been placed under Configuration Management: Post Implementation Evaluation Report (PMM-16 or PMM-16 Exp); Transition Plan (SEM-701); Installation Plan (SEM-703); and Training Plan (SEM-703)?

H. Resources for the Project Quality Assessment

Project Quality Assessment Team

PQA team size can vary from two people to four people, depending on project size and complexity. The typical PQA has three team members, including the team lead and two additional team members. A small project may only have two PQA team members and a large project may have four team members.

The PQA Team Lead operates as the main contact between the PQA Team and the project team. The PQA Team Lead initiates contact with the Project Manager to set up the PQA Kickoff Meeting and prepares the initial PQA Plan. The PQA Team Lead facilitates the kickoff meeting, and completes the PQA Plan, with consensus from the PQA Team, and sends it to the Project Manager for review and agreement. The PQA Team Lead schedules and facilitates both the Mid-Project Quality Assessment Meeting (if needed) and the Project Quality Assessment Meeting, and is responsible for developing the PQA Report. The PQA Team Lead schedules and facilitates the PQA meeting to go over the report with the Project Manager. The PQA Team Lead initiates and finalizes the PQA closeout activity.

The PQA Team can assist the PQA Team Lead with any of her/his responsibilities. The PQA team members can assist in the development of the PQA Plan as well as playing an important role in supporting the PQA Team Lead and actively participating in the PQA kickoff meeting and assessment meetings. The PQA team members also play a key role in helping to bring well-rounded experience to the PQA process and associated documents.

Project Team Involvement in the Project Quality Assessment Process

In addition to the Project Manager, other project team members may be involved in the Project Quality Assessment Process. This includes any project quality assurance personnel associated with the project; project management specialists

(the individual who is responsible for documenting project or system information on SUITE forms); team leads; or other staff that the Project Manager may involve in the assessment process.

I. Expectations of PQA Stakeholders

Project Quality Assessment Lead and PQA Team

- Plan the Project Quality Assessment and carry out assigned responsibilities effectively and efficiently
- Comply with applicable Process and Product Quality Assurance (PPQA) and PQA requirements
- Communicate and clarify Project Quality Assessment objectives and requirements
- Document PQA observations
- Retain and safeguard artifacts pertaining to the Project Quality Assessment
- Treat privileged project- and product-based information with discretion
- Spend the time to provide and clarify Project Quality Assessment requirements
- Be specific and precise about Project Quality Assessment requirements
- Make timely decisions regarding the Project Quality Audit
- Review and provide timely feedback regarding relevant artifacts
- Offer the Project Manager / Project Team various training and mentoring opportunities with regard to SUITE processes, as needed

Project Manager and Project Team

- Inform relevant stakeholders about the objectives and scope of the Project Quality Assessment
- Provide resources needed to the Project Quality Assessment Team to ensure an effective and efficient assessment
- Provide access to evidential material (artifacts) as requested by the PQA Team Lead
- Determine and initiate corrective actions based on the PQA Report

Other Stakeholders

PPQA Team

- Ensure consistency and objectivity among the various Project Quality Assessment Teams
- Assist the PQA Team with providing training and mentoring assistance to the Project Team
- Assist in the escalation of issues related to SUITE compliance

J. Typical Artifacts (Documents) Expected for the Assessment

The PQA kickoff meeting is typically held after the project has gone through the Initiation and Planning SEM Stage (or Initiation, Requirements, and Design Stage for a project using SEM Express). If the project is further along in the development cycle (such as Requirements Definition), and has completed additional stage exits, it is expected that these additional documents will also be supplied to the PQA Team Lead at or before the PQA kickoff meeting.

The Mid-Project Quality Assessment* will typically be performed after the System Design Stage of the SEM. If any artifacts previously given to the PQA Team Lead have been modified significantly, they should be resent to the PQA Team Lead, in addition to additional artifacts required for the Requirements Definition, Functional Design, and Systems Design stages. The PQA Team Lead will distribute these artifacts to the PQA team.

The Project Quality Assessment will typically be performed after the Implementation Stage of the SEM (or SEM Express). If any artifacts previously given to the PQA Team Lead have been modified significantly, they should be resent to the PQA Team Lead, in addition to additional artifacts required for all SEM stages. The PQA Team Lead will distribute these artifacts to the PQA team.

The artifacts needed for each SEM and SEM Express Stage is depicted in the PPQA Process Manual, Appendix A.

* Not applicable to projects utilizing the SEM Express methodology, as the first stage exit for SEM Express includes Initiation & Planning, Requirements Definition, Functional Design, and System Design.

Chapter: **6.0 Project Quality Assessment Checklists**

Description: The Project Quality Assessment (PQA) Checklists, which can be found in **Appendix B** of this document, are a key tool in determining how the project is utilizing the SUITE processes. The PQA Checklists also help the review team determine where the project team needs additional guidance (their weaknesses) and where the team can offer proven methods to other teams (their strengths).

There are four PQA checklists:

- PQA Initial Review Checklist (PQA-01)
- PQA Mid-Project Review Checklist (PQA-02)
- PQA Testing Checklist (PQA-03); and
- PQA Post-Project Review Checklist (PQA-04)

Each PQA team member completes the checklist(s) prior to the PQA Assessment Meeting. During the PQA Assessment Meeting, the team comes to a consensus on each item within the checklist(s). If a consensus cannot be reached, the PQA Team Lead will make a decision on the item or to get additional clarification, either from the Project Manager or the full PPQA Team, depending on the issue.

The checklists are shared with the Project Manager after each review. If there are any outstanding issues with an item on one of the checklists following the Post-Project Review, that information is recorded on the Quality Assessment Report during the PQA Assessment Meeting. For more information on completing the Quality Assessment Report, see Chapter 7 in this document.

PQA Initial Review Checklist: The PQA Initial Review Checklist (PQA-01) is used by the PQA Review Team after the Initiation and Planning Stage has been completed. This checklist gives the reviewers a good indication whether the State's Project Management Methodology (PMM) has been used. It also gives a good indication as to whether the Structured Walkthrough (SWT) and Stage Exit processes are being followed (by looking at the Initiation and Planning SWT and Stage Exit documentation).

For projects using SEM Express, the PQA Initial Review Checklist (PQA-01) will be combined with the PQA Mid-Project Review Checklist (PQA-02), as the first stage exit on this type of project occurs after the Systems Design Stage.

PQA Mid-Project Review Checklist: The PQA Mid-Project Review Checklist (PQA-02) is used by the PQA Review Team after the Systems Design Stage has been completed. This checklist gives the reviewers a good indication as to what extent the State's Systems Engineering Methodology (SEM) has been used.

PQA Testing Review Checklist: The PQA Testing Review Checklist (PQA-03) is used by the PQA Review Team

after the Systems Design Stage has been completed, and again after the Implementation Stage has been completed. This checklist gives the reviewers a good indication whether the project team is using good testing practices, as dictated by the SEM.

PQA Post-Project Review Checklist: The PQA Post-Project Review Checklist (PQA-04) is used by the PQA Review Team after the Implementation Stage has been completed. This checklist gives the reviewers a good well-rounded indication as to the extent that the project team is following the SUITE processes.

Chapter: **7.0 Project Quality Assessment Reports**

Description: There are two reports that are completed by the Project Quality Assessment Review Team. The two reports are the Quality Assessment Report and the PQA Post-Review Action Plan. They are both typically completed during the final PQA Team Assessment Meeting, and shared with the Project Manager for accuracy and clarification.

Quality Assessment Report: The Quality Assessment Report details the outstanding findings from the Project Quality Assessment Checklists used for the assessment. The form is broken into three sections: Findings; Observations; and Summary.

Findings Section: When a finding is found, the details of that finding are recorded in this section of this document. A finding is an omission or non-compliance issue that requires attention, corrective or preventative action and follow-up. The findings number, Major/Minor, and Process Area are transferred from the respective PQA Checklist. Descriptions in the Findings section should be no longer than one or two sentences. If more detail is needed, it can be done in the Summary section. If the finding is major, it could impact the development life cycle or integrity of the product. Ex: 1) Software requirements not under configuration management. 2) Software media is mislabeled in Software library.

When the PQA Review Team has gone through the applicable checklist(s), the total number of findings, as well as a breakdown of Major and Minor findings are tallied.

Observations Section: This section lists general items observed by the PQA Reviewer(s) during the review. This section can encompass items such as attitude of the project team, or the organization and presentation of the documents used for the review.

Summary Section: This section is where the PQA Review Team members who performed the review will summarize the compliance and non-compliance issues found during the reviews, as well as anything else they feel is relevant. If more detail is needed for one of the findings listed above, this is the section where it should be added.

When the PQA Review Team has completed this report and the team feels confident that the findings, observations, and summary are accurate to the best of their knowledge and abilities, this report is delivered to the Project Manager to check for items that have been misinterpreted or, in the Project Manager's opinion are inaccurate. If there are such items, the PQA Review Team will reconvene and consider the Project Manager's input.

The following page contains the Quality Assessment Report template.

DTMB Project Quality Assessment Review
Quality Assessment Report
Report Date: MM/DD/20YY

Project:	
Project Contact:	**Project Manager:**
Reviewer(s):	**Review Date:**
PPQA Level Phase: 1: Existence and Completeness of Artifacts **2:** Quality of Artifacts	
Project Quality Assessment Type: (Initial Review) (Mid-Project Review) (Post-Project Review)	

Findings:

#	Description	Major / Minor	Process Area

Total Number of Findings: 000

Number of Major Findings: 000

Number of Minor Findings: 000

Observations:

#	Description

Summary:

PQA Post-Review Action Plan:

The PQA Post-Review Action Plan lists items/issues that the PQA Review Team expects to see resolved by the project team prior to closing out the PQA Review. If there are no issues to track to completion, then this report is not used.

The PQA Post-Review Action Plan contains the following data items:

- Finding Number from Quality Assessment Report
- Description of the finding
- Action to remediate/mitigate the finding
- Agreed-to completion date
- Actual completion date
- PPQA Consensus Comments
    - Risk to project
    - Follow up
    - Actions taken
    - Closure information
    - Etc.

This report will be presented to the Project Manager along with the more detailed Quality Assessment Report. Once there is agreement on what will actually be tracked through this document, the PQA Post-Review Action Plan is used to track those items to completion.

If there are critical items on this report that are not resolved within a reasonable timeframe, those issues will be brought to the PPQA Team to determine next steps. These next steps could include:

- Take no additional action, insert a note in this PM's file to track during the next PQA Review; or
- Escalating the issue up the management chain

The following page contains the PQA Post-Review Action Plan template.

PQA Post-Review Action Plan

Project:	Project Manager:
Project Contact:	Review Date:
Reviewer(s):	PQA Report Date:
PQA Level Phase: 1 / 2	
SEM Stage:	

Finding # from QA Report	Description	Action to Remediate/Mitigate	Completion Date (agreed to)	Completion Date (actual)	PQA Comments (on risk to project, follow-up, actions taken, closure, etc.)

Chapter: **8.0 PPQA Feedback Tools**

Description: Receiving feedback from PPQA process users is a critical part of the SUITE PPQA processes. To achieve a mature process, it is essential to receive constructive feedback on the effectiveness and efficiency of PPQA processes.

The Process and Product Quality Assurance process area supports the delivery of high-quality products and services by providing the project staff and managers at all levels with appropriate visibility into, and feedback on, processes and associated work products throughout the life of the project. This chapter deals with receiving feedback from the projects that are being reviewed, to ensure that the processes are efficient and effective. If feedback is received that calls for process improvement, the PPQA Team will make the necessary process adjustments.

Post-Review Survey: The Post-Review Survey document is given to the Project Manager at the PQA Review Close-out meeting. After completion of the survey, the Project Manager sends it to the PPQA Administrative Assistant. The PPQA Administrative Assistant sends a copy to the PQA Team Lead, as well as entering the data into the PPQA repository. The PPQA Administrative Assistant brings a summary of all of the Post-Review Surveys to the monthly PPQA meeting for discussion of possible process improvements, based on survey comments.

A copy of the Post-Review Survey document can be found on the following page.

Post-Review Survey

Project Name: _____ Project Manager: _____

PM Effort Hours Spent on Review: _____ Project Team Effort Hours: _____

A Project Quality Assessment Team recently completed a review for your project. Please take a few moments to give us feedback about the process and assist us in improving the Project Quality Assessment Review process.

1. The Project Quality Assessment Review added value to the project.

Disagree 1 2 3 4 5 Agree
(circle one)

Comments:

---

2. The PPQA process and expectations for the review were clearly communicated by the Project Quality Assessment Review team.

Disagree 1 2 3 4 5 Agree
(circle one)

Comments:

---

3. Throughout the Project Quality Assessment Review process, questions were resolved in a timely manner.

Disagree 1 2 3 4 5 Agree
(circle one)

Comments:

---

4. Tell us what went well during the Project Quality Assessment Review and what improvements you would recommend.

Comments:

---

5. Are there any other comments you would like to share with the Project Quality Assessment Review Team?

Comments:

Please return this completed form to the Project Quality Assessment Review Team Lead. Thank you!

Chapter: **9.0 Capturing Best Practices**

PPQA Best Practice Procedure:

Steps:

1. PQA Review Team identifies candidate best practice document, technique, or practice.
2. PQA Team Lead brings to monthly PPQA meeting recommending adoption.
3. PPQA adopts or rejects recommendation. If recommendation rejected, stop.
4. PQA Team Lead has identifying info removed, as follows

a. All references to stakeholder names replaced with <project team member>; <project sponsor>; <OES Liaison>; or other appropriate name
b. All references to the project name replaced with <project name>, if requested
c. References to specific agency program areas replaced with <agency program area>, if requested
d. Any security related information is to be replaced with generic information

5. PQA Team Lead places the modified document(s) in the SUITE Best Practices Library (see proposed format below)

SUITE Best Practices Library File Structure:

Note: Samples are put in the appropriate folder based on when that document is normally initiated

(folder) **Background Info and Pre-Project Startup Document Samples**
- (subfolder) Work Statement Samples
- (subfolder) RFP Samples
- (subfolder) Proposal Evaluation Samples
- (subfolder) Other Procurement Related Document Samples
- (subfolder) Other Background info and Pre-Project Document Samples

(folder) **Initiation & Planning Stage Document Samples**
- (subfolder) DIT-0126 IT Business Case Samples
- (subfolder) PMM-01 Project Concept Samples
- (subfolder) PMM-02 Project Charter Samples
- (subfolder) PMM-03 Project Plan Samples
- (subfolder) PMM-03 Exp Project Plan Express Samples
- (subfolder) PMM-04 Work Breakdown Structure Samples
- (subfolder) PMM-05 Resource Plan Samples

(subfolder) PMM-06 Risk Management Plan Samples
(subfolder) PMM-07 Quality Plan Samples
(subfolder) PMM-08 Communications Plan Samples
(subfolder) PMM-09 Change Management Plan Samples
(subfolder) PMM-10/PMM-11 Project Budget Estimate Samples
(subfolder) PMM-12 Planning Transition Checklist Samples
(subfolder) SEM-0301 Maintenance Plan Samples
(subfolder) SEM-0302 Software Configuration Management Plan Samples
(subfolder) SEM-0188 Project Metrics Collection Samples
(subfolder) DIT-0170 Security Plan & Assessment Samples
(subfolder) DIT-0208 Business Application Criticality Samples
(subfolder) Other Initiation & Planning Related Document Samples

(folder) **Requirements Definition Stage Document Samples**
(subfolder) SEM-0401 Requirements Traceability Matrix Samples
(subfolder) SEM-0402 Requirements Specification Samples
(subfolder) Other Requirements Definition Related Document Samples

(folder) **Functional Design Stage Document Samples**
(subfolder) SEM-0501 Functional Design Samples
(subfolder) Other Functional Design Related Document Samples

(folder) **System Design Stage Document Samples**
(subfolder) SEM-0601 Conversion Plan Samples
(subfolder) SEM-0602 Test Plan Samples
(subfolder) SEM-0603 Test Type Approach and Report Samples
(subfolder) Unit Testing Samples
(subfolder) Function Testing Samples
(subfolder) Integration Testing Samples
(subfolder) Verification Testing Samples
(subfolder) Performance Testing Samples
(subfolder) System & Standards Testing Samples
(subfolder) UAT Testing Samples
(subfolder) Regression Testing Samples
(subfolder) SEM-0604 System Design Samples
(subfolder) SEM-0606 Test Case Samples
(subfolder) Other System Design Related Document Samples

(folder) **Construction Stage Document Samples**
(subfolder) SEM-0701 Transition Plan Samples
(subfolder) SEM-0702 Installation Plan Samples
(subfolder) SEM-0703 Training Plan Samples
(subfolder) Other Construction Related Document Samples

(folder) **Testing Stage Document Samples**
(subfolder) Other Testing Related Document Samples

(folder) **Implementation Stage Document Samples**
- (subfolder) PMM-16 Post Implementation Evaluation Report Samples
- (subfolder) PMM-16 Exp PIER Express Samples
- (subfolder) Other Implementation Related Document Samples

(folder) **Other SEM Document Samples**
- (subfolder) SEM-0187 Structured Walkthrough Meeting Record Samples
- (subfolder) SEM-0189 Stage Exit Approvals Samples

(folder) **Other PMM Document Samples**
- (subfolder) PMM-13 Project Status Report Samples
- (subfolder) PMM-14 Project Change Request Samples
- (subfolder) PMM-15 Project Issue Document Samples
- (subfolder) PMM-17 Active Project Transition Document Samples
- (subfolder) PMM-18 Lessons Learned Samples

(folder) **Other Project Related Document Samples**

Chapter: **10.0 PPQA Metrics**

There are currently two documents that capture and report on SUITE Metrics. They include:

1. PQA Metrics Collection Worksheet
2. PPQA Metrics Spreadsheet

PQA Review data is initially captured on the PQA Metrics Collection Worksheet. When the worksheet has been completed, the data is recorded on the PPQA Metrics Spreadsheet within the SharePoint environment. The PQA Lead is responsible for both capturing metrics data on the PQA Metrics Collection Worksheet and transferring the data to the PPQA Metrics Spreadsheet.

The PQA Lead should notify the PPQA Team Lead when they have updated the PPQA Metrics Collection Spreadsheet.

PQA Metrics Collection Worksheet:

It is suggested that the PQA Lead keeps a copy of this worksheet in the File for each PQA Review. This worksheet should be completed as the review progresses. An example is tracking the number of hours that the project manager, their team, the PQA Team, and the PQA Lead. It is a best practice to update this information periodically/often, rather than once at the end of the review, as people often lose track of time segments expended on tasks.

A copy of the PQA Metrics Collection Worksheet can be found in Appendix C of this document. Instructions for completion are included on this worksheet.

PPQA Metrics Spreadsheet:

The PPQA Metrics Spreadsheet contains the same fields as the PQA Metrics Collection Worksheet, and is presented in row format for each review that had been performed. When a particular review has been completed, the PQA Lead transfers data from the PQA Metrics Worksheet to this spreadsheet.

The PPQA Metrics Spreadsheet contains a calculated field called Compliance Percent. The formula for this calculation is as follows:

Compliance Percent = “Compliance - Yes” divided by (“Compliance - Yes” + “Compliance – Major” + “Compliance – Minor”)

This spreadsheet also totals on various fields. The spreadsheet will incorporate several graphs and charts as it matures.

Bibliography

The following materials were referenced in the preparation of this guide.

1. Carnegie Mellon University, Software Engineering Institute, *Capability Maturity Model: Guidelines for Improving the Software Process*, Addison Wesley Longman, Inc., 1994.

2. Carnegie Mellon University, Software Engineering Institute website: http://www.sei.cmu.edu/index.html

3. State of Michigan Project Management Methodology http://www.michigan.gov/suite

4. State of Michigan Systems Engineering Methodology http://www.michigan.gov/suite

5. http://en.wikipedia.org/wiki/Process_area_(CMMI)

6. U.S. Department of Energy, Office of the Chief Information Officer, *In-Stage Assessment Process Guide, Version 3, September 2002*.

Glossary

Artifact – Work product that results from utilizing SUITE methodologies and processes. This may includes files, documents, products, parts of a product, services, process descriptions, and specifications.

Objectively Evaluate – To review activities and work products against criteria which minimize subjectivity and bias by the reviewer. An example of an objective evaluation is an audit against requirements, standards, or procedures by an independent quality assurance function.

Process and Product Quality Assurance (PPQA) – CMMI Level 2 process area that provides staff and management with a methodology to acquire objective insight into processes and associated work products.

Project Quality Assessment (PQA) Review --

Quality Assurance – A planned and systematic means for assuring management that the defined standards, practices, procedures, and methods of the process are applied.

Quality Control – The operational techniques and activities that are used to fulfill requirements for quality.

Appendix A

Documents Generally Required for SEM and SEM Express

Large Project Using Full SEM:

The following documents are generally required for **SEM stage exit approvals**. These documents are included in the list of documents that will be reviewed, as appropriate.

*Denotes this template is assessed as part of the "Project Monitoring and Control" PQA Checklist section.

Initiation and Planning

Project Concept Document (PMM-01), if required
IT Initiative Business Case (DIT-126), if required
Project Charter (PMM-02)
Project Plan (PMM-03 or PMM-03 EXP)
- If PMM-03, include the following attachments to the Project Plan:
  - Work Breakdown Structure (PMM-04) or as represented in the project schedule
  - Resource Plan (PMM-05) or as represented in the project schedule
  - Risk Management Plan (PMM-06)
  - Quality Management Plan (PMM-07)
  - Communication Management Plan (PMM-08)
  - Change Management Plan (PMM-09)
  - IT Project Budget Estimate (PMM-11) or as represented in the project schedule

Project Schedule
Initial Security Plan and Assessment (DIT-170)
Initial Maintenance Plan (SEM-301)
Initial Software Configuration Management Plan (SEM-302)
Procurements documents (DIT-153, DIT15B), if applicable
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)

Requirements Definition

*Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated in this stage
*Project Status Reports (PMM-13)
*Project Change Request(s) (PMM-14), if required
*Project Issue Document(s) (PMM-15), if required
Security Plan and Assessment (DIT-170), if updated in this stage
Maintenance Plan (SEM-301), if updated in this stage
Software Configuration Management Plan (SEM-302), if updated in this stage
Initial Requirements Specification (SEM-402)
Initial Requirements Traceability Matrix (SEM-401)

EA Solution Assessment, if required
Completed Infrastructure Services Request (DIT-184), if required
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)

Functional Design

*Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated in this stage
*Project Status Reports (PMM-13)
*Project Change Request(s) (PMM-14), if required
*Project Issue Document(s) (PMM-15), if required
Security Plan and Assessment (DIT-170), if updated in this stage
Maintenance Plan (SEM-301), if updated in this stage
Software Configuration Management Plan (SEM-302), if updated in this stage
Final Requirements Specification (SEM-402)
Requirements Traceability Matrix (SEM-401)
Functional Design (SEM-501)
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)

System Design

*Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated in this stage
*Project Status Reports (PMM-13)
*Project Change Request(s) (PMM-14), if required
*Project Issue Document(s) (PMM-15), if required
Security Plan and Assessment (DIT-170), if updated in this stage
Maintenance Plan (SEM-301), if updated in this stage
Final Software Configuration Management Plan (SEM-302)
Requirements Traceability Matrix (SEM-401)
System Design (SEM-604)
Initial Conversion Plan (SEM-601)
Initial Test Plan (SEM-602)
Initial Test Type Approach and Report (SEM-603)
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)

Construction

*Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated in this stage
*Project Status Reports (PMM-13)
*Project Change Request(s) (PMM-14), if required
*Project Issue Document(s) (PMM-15), if required
Security Plan and Assessment (DIT-170), if updated in this stage
Maintenance Plan (SEM-301), if updated in this stage

Requirements Traceability Matrix (SEM-401)
Conversion Plan (SEM-601), if updated in this stage
Final Test Plan (SEM-602)
Test Type Approach and Report (SEM-603)
Initial Transition Plan (SEM-701)
Initial Installation Plan (SEM-702)
Initial Training Plan (SEM-703)
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)

Testing
*Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated in this stage
*Project Status Reports (PMM-13)
*Project Change Request(s) (PMM-14), if required
*Project Issue Document(s) (PMM-15), if required
Security Plan and Assessment (DIT-170), if updated in this stage
Maintenance Plan (SEM-301), if updated in this stage
Final Requirements Traceability Matrix (SEM-401)
Conversion Plan (SEM-601), if updated in this stage
Test Plan (SEM-602) , if updated in this stage
Final Test Type Approach and Report (SEM-603)
Transition Plan (SEM-701), if revised in this stage
Final Installation Plan (SEM-702)
Final Training Plan (SEM-703)
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)

Implementation
Final Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments
Post Implementation Evaluation Report (PMM-16)
Project Lessons Learned (PMM-18) *[may have zero to many]*
Final Security Plan and Assessment (DIT-170)
Final Maintenance Plan (SEM-301)
Final Conversion Plan (SEM-601), if updated in this stage
Final Transition Plan (SEM-701), if updated in this stage
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)

Other Projects Using Full SEM:

Initial Review
Project Concept Document (PMM-01), if required
IT Initiative Business Case (DIT-126), if required

Project Charter (PMM-02)
Project Plan (PMM-03 or PMM-03 EXP)
- If PMM-03, include the following attachments to the Project Plan:
  - Work Breakdown Structure (PMM-04) or as represented in the project schedule
  - Resource Plan (PMM-05) or as represented in the project schedule
  - Risk Management Plan (PMM-06)
  - Quality Management Plan (PMM-07)
  - Communication Management Plan (PMM-08)
  - Change Management Plan (PMM-09)
  - IT Project Budget Estimate (PMM-11) or as represented in the project schedule

Project Schedule
Initial Security Plan and Assessment (DIT-170)
Initial Maintenance Plan (SEM-301)
Initial Software Configuration Management Plan (SEM-302)
Structured Walkthrough Meeting Record(s) (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)
SUITE Metrics Collection Document (SEM-188)
Applicable procurement documents (DIT-153/DIT-15B)
Business Application Criticality Request (DIT-208)
Enterprise Architecture Solution Assessment (spreadsheet from EA)

Mid-Project Review
Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated in this stage
Project Status Reports (PMM-13)
Project Change Request(s) (PMM-14), if required
Project Issue Document(s) (PMM-15), if required
Security Plan and Assessment (DIT-170)
Maintenance Plan (SEM-301), if updated
Final Software Configuration Management Plan (SEM-302)
EA Solution Assessment, if required
Infrastructure Services Request, if required
Requirements Specification (SEM-402)
Requirements Traceability Matrix (SEM-401)
Functional Design (SEM-501)
Software Configuration Management Plan (SEM-302), if updated
System Design (SEM-604)
Initial Conversion Plan (SEM-601), if applicable
Initial Test Plan (SEM-602)
Initial Test Type Approach and Report (SEM-603)
Structured Walkthrough Meeting Records (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)
SUITE Metrics Collection Document (SEM-188)
Applicable procurement documents (DIT-153/DIT-15B) not already reviewed
Enterprise Architecture Solution Assessment (spreadsheet from EA)

Evidence of an eMichigan Web Review, if required
Completed Infrastructure Services Request (DIT-184), if required

Post-Project Review
Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated
Project Status Reports (PMM-13)
Project Change Request(s) (PMM-14), if required
Project Issue Document(s) (PMM-15), if required
Post Implementation Evaluation Report (PMM-16 or PMM-16 Exp)
Project Lessons Learned (PMM-18) *[may have zero to many]*
Security Plan and Assessment (DIT-170)
Maintenance Plan (SEM-301), if updated
Requirements Specification (SEM-402), if revised
Final Requirements Traceability Matrix (SEM-401)
Functional Design (SEM-501), if revised
System Design (SEM-604), if revised
Conversion Plan (SEM-601), if updated
Transition Plan (SEM-701)
Installation Plan (SEM-702)
Training Plan (SEM-703)
Conversion Plan (SEM-601), if updated
Test Plan (SEM-602), if updated
Test Cases (SEM-606)
Final Test Type Approach and Report (SEM-603)
Business Continuity Document (DIT-208), if revised
Structured Walkthrough Meeting Records (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)
SUITE Metrics Collection Document (SEM-188)

Projects Using SEM Express:

Initial Review
Project Charter (PMM-02)
Project Plan (PMM-03 EXP)
Project Schedule
Initial Security Plan and Assessment (DIT-170)
Maintenance Plan (SEM-301)
Software Configuration Management Plan (SEM-302)
Applicable procurement documents (DIT-153/DIT-15B)
Business Application Criticality Request (DIT-208)
Software Configuration Management Plan (SEM-302), if updated
Requirements Specification (SEM-402)
Requirements Traceability Matrix (SEM-401)
Functional Design (SEM-501)

System Design (SEM-604)
Initial Conversion Plan (SEM-601), if applicable
Initial Test Plan (SEM-602)
Initial Test Type Approach and Report (SEM-603)
Structured Walkthrough Meeting Records (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)
Initial SUITE Metrics Collection Document (SEM-188)
Enterprise Architecture Solution Assessment (spreadsheet from EA)
Evidence of an eMichigan Web Review, if required
Completed Infrastructure Services Request (DIT-184), if required

Post-Project Review
Project Plan (PMM-03 or PMM-03 EXP) and applicable attachments, if updated
Project Status Reports (PMM-13)
Project Change Request(s) (PMM-14), if required
Project Issue Document(s) (PMM-15), if required
Post Implementation Evaluation Report (PMM-16 or PMM-16 Exp)
Project Lessons Learned (PMM-18) *[may have zero to many]*
Security Plan and Assessment (DIT-170)
Maintenance Plan (SEM-301), if updated
Requirements Specification (SEM-402), if revised
Final Requirements Traceability Matrix (SEM-401)
Functional Design (SEM-501), if revised
System Design (SEM-604), if revised
Conversion Plan (SEM-601), if updated
Test Plan (SEM-602), if updated
Test Cases (SEM-606)
Final Test Type Approach and Report (SEM-603)
Transition Plan (SEM-701), if revised
Installation Plan (SEM-702)
Training Plan (SEM-703)
Business Continuity Document (DIT-208), if revised
Structured Walkthrough Meeting Record (SEM-187), including the Defect Tracking Log (SEM-186 or equivalent)
Stage Exit Approvals (SEM-189)
SUITE Metrics Collection Document (SEM-188)

State of Michigan
PQA Initial Review Checklist

A. General Information

Project ID/Acronym:		**Review Date:**	
Controlling Agency:		**Authorized By:**	
Review Team Members:			
Hours to Complete Including Preparation, Review, and Inspection Time:			

B. Review

1. If a requirement is fully met, indicate YES with an "X" in the YES column.
2. If a requirement is applicable but not fully met, indicate NO with an "X" in the NO column, whether it is a (Maj)or or (Min)or defect, and provide an explanation in the Comments section.
3. If a requirement is not applicable to the project (for example, if it was tailored out), indicate N/A with an "X" in the N/A column and provide an explanation in the Comments section.
4. Indicate under the Comments section in the Comment column at the bottom of the checklist the specifics of the deficiency, the reason for the requirement's inapplicability, or any amplifying information.
5. Maintain a count of each work product and process reviewed during this PQA Initial Review activity. See the last table. These details are required metrics data.

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
Project Control						
I-1.	PP	**If needed**, was the IT Initiative Business Case document (DIT-126) created and completed?	☐	☐	☐	☐
I-2.	PP	**If needed**, was the Project Concept document (PMM-01) created, completed and signed-off by all key stakeholders?	☐	☐	☐	☐
I-3.	PP	Was the Project Charter (PMM-02) created, completed and signed-off by all key stakeholders?	☐	☐	☐	☐
I-4.	PP	Was the Project Plan (PMM-03 or PMM-03 EXP) created, completed and signed-off by all key stakeholders?	☐	☐	☐	☐
I-5.	PMC	Does the Project Schedule section of the Project Plan (PMM-03 or PMM-03 Exp)-contain Milestones that can be tracked? Note: The Project Schedule typically gives a thorough representation of the work breakdown structure.	☐	☐	☐	☐
I-6.	PP	Was the Work Breakdown Structure (PMM-04) created and completed? Note: Often times this is part of the Project Schedule.	☐	☐	☐	☐
I-7.	PP	**If PMM-03 (full PMM) was used**, was the Resource Plan (PMM-05) created and completed? Note: The Project Schedule can provide a thorough representation of the Resource Plan, if such a view or report is available.	☐	☐	☐	☐
I-8.	PP	**If PMM-03 (full PMM) was used**, was the Risk Management Plan (PMM-06) created and completed?	☐	☐	☐	☐
I-9.	PP	**If PMM-03 (full PMM) was used**, was the Quality Management Plan (PMM-07) created and completed?	☐	☐	☐	☐
I-10.	PP	**If PMM-03 (full PMM) was used**,, was the Communications Management Plan (PMM-08) created and completed?	☐	☐	☐	☐
I-11.	PP	**If PMM-03 (full PMM) was used**, was the Change Management Plan (PMM-09) created and completed?	☐	☐	☐	☐
I-12.	PP	**If PMM-03 (full PMM) was used**, was the IT Project Budget Estimate (PMM-11) created and completed? Note: The Project Schedule can provide a thorough representation of the IT Project Budget Estimate, if such a view or report is	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
		available				
I-13.	PP	**If PMM-03 Exp (Express) was used,** were all sections completed appropriately?	☐	☐	☐	☐
I-14.	SAM	If contractors are applicable to this project, is there evidence that they are being monitored according to the Statement of Work (SOW)?	☐	☐	☐	☐
Initiation and Planning						
I-15.	TS	Was the Maintenance Plan (SEM-301) created?	☐	☐	☐	☐
I-16.	TS	Was the initial Security Plan and Assessment (DIT-170 or DIT-170 EXP) created, completed and signed-off by all key stakeholders?	☐	☐	☐	☐
I-17.	CM	Was the Software Configuration Management Plan (SEM-302) created?	☐	☐	☐	☐
I-18.	CM	Are all project- and product-related assets under configuration management, according to the Software Configuration Management Plan (SEM-302)?	☐	☐	☐	☐
I-19.	SAM	Have the appropriate Procurement Documents (ITRAC Request, DIT-15B, etc.) been created and completed, if needed?	☐	☐	☐	☐
I-20.	MA	Has the Project Metrics Collection (SEM-188) document been created and completed through the Initiation & Planning Stage?	☐	☐	☐	☐
I-21.	??	Has Business Continuity Planning discussions taken place, and if necessary, has the Business Application Criticality Request (DIT-208) been initiated?	☐	☐	☐	☐
I-22.	VER	Were Structured Walkthroughs performed on all required documents, as evidenced by the Structured Walkthrough Meeting Record (SEM-187) and the Defect Tracking Log (SEM-186 or equivalent)?	☐	☐	☐	☐
I-23.	VER	Were all key stakeholders present at all Structured Walkthroughs, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐
I-24.	VAL	Was a Stage Exit performed, as evidenced by the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐
I-25.	VAL	Were all key stakeholders present at the Stage Exit Meeting, as evidenced on the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐

ITEM NO.	FINDINGS	AGREED-TO RESOLUTION DATE	DATE RESOLVED

WORK PRODUCTS AND PROCESSES REVIEWED

ADDITIONAL COMMENTS

State of Michigan
PQA Mid-Project Review Checklist

C. General Information

Project ID/Acronym:		**Review Date:**	
Controlling Agency:		**Authorized By:**	
Review Team Members:			
Hours to Complete Including Preparation, Review, and Inspection Time:			

D. Review

1. If a requirement is fully met, indicate YES with an "X" in the YES column.
2. If a requirement is applicable but not fully met, indicate NO with an "X" in the NO column, whether it is a (Maj)or or (Min)or defect, and provide an explanation in the Comments section.
3. If a requirement is not applicable to the project (for example, if it was tailored out), indicate N/A with an "X" in the N/A column and provide an explanation in the Comments section.
4. Indicate under the Comments section in the Comment column at the bottom of the checklist the specifics of the deficiency, the reason for the requirement's inapplicability, or any amplifying information.
5. Maintain a count of each work product and process reviewed during this PQA Mid Project Review activity. See the last table. These details are required metrics data.

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
Project Control						
M-1.	PMC	Is the Project Schedule complete and up to date? (Look for items in the Project Schedule that are more than two weeks late)	☐	☐	☐	☐
M-2.	PMC	Does the Project Schedule contain Milestones that are tracked and are up to date?	☐	☐	☐	☐
M-3.	PMC	If there were significant changes to the project, was one or more Change Requests (PMM-14) created, completed, and signed-off (approval) by the key project stakeholders?	☐	☐	☐	☐
M-4.	PMC	If there were one or more Change Requests (PMM-14) approved for this project, was the Project Plan (PMM-03 or PMM-03 EXP) and associated attachments (such as the Risk Management Plan, Quality Management Plan, Communication Management Plan, etc.) updated to reflect the changes?	☐	☐	☐	☐
M-5.	PMC	If there were one or more Change Requests (PMM-14) approved for this project, was the Project Schedule updated to reflect the changes?	☐	☐	☐	☐
M-6.	PMC	If there were one or more Change Requests (PMM-14) approved for this project, were all project stakeholders notified?	☐	☐	☐	☐
M-7.	PMC	Are Project Status Reports (PMM-13) used on the project, and being used to monitor current activity status, significant accomplishments for current period, planned activities for next period, financial status, technical status/issues, previous action items, and risk status?	☐	☐	☐	☐
M-8.	PMC	If any Project Issue documents (PMM-15) were used on the project, did they receive sign-off from the key stakeholders?	☐	☐	☐	☐
M-9.	MA	Is there evidence that the actual values (hours and dollars) are being kept on this project? (This data should be recorded on the Project Metrics Collection (SEM-188) document.	☐	☐	☐	☐
M-10.	MA	Is the Project Metrics Collection (SEM-188) document completed	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
		through the System Design Stage?				
M-11.	SAM	If subcontractors are applicable to this project, is there evidence that they are being monitored according to the Statement of Work (SOW)?	☐	☐	☐	☐
Initiation and Planning Stage Documents						
M-12.	TS	If the Maintenance Plan (SEM-301) was revised, was the change referenced in the document control section of the document?	☐	☐	☐	☐
M-13.	TS	Was the Security Plan and Assessment (DIT-170 or DIT-170 EXP) document signed-off in the Requirements Definition Stage, Functional Design Stage, and the System Design Stage by the OES Liaison?	☐	☐	☐	☐
M-14.	CM	If the Software Configuration Management Plan (SEM-302) changed, was the change referenced in the change control section of the document?	☐	☐	☐	☐
M-15.	CM	Are configuration management activities (CM reviews, placing configuration items under CM, adhering to the set versioning scheme, maintaining baselines) for the project performed, tracked and updated, as per the Software Configuration Management Plan (SEM-302)?	☐	☐	☐	☐
M-16.	SAM	Have the appropriate Procurement Documents (ITRAC Request, DIT-15B, etc.) been created and completed, if needed?	☐	☐	☐	☐
Requirements Definition Stage Documents						
M-17.	RM	Was the Requirements Specification (SEM-402) document created, completed and signed-off (both initial and final) by all key stakeholders?	☐	☐	☐	☐
M-18.	RM	If changes were made to the Requirements Specification (SEM-402) document, was the change control section updated?	☐	☐	☐	☐
M-19.	RM	If changes were made to the Requirements Specification (SEM-402) document after final signoff, did the document receive additional signoffs (approvals)?	☐	☐	☐	☐
M-20.	RM	Was the Requirements Traceability Matrix (SEM-401) created, completed and initially signed-off by all key stakeholders?	☐	☐	☐	☐
M-21.	RM	Was the Requirements Traceability Matrix (SEM-401) updated during the Functional and System Design Stages to reflect tracing the requirements through both of these stages?	☐	☐	☐	☐
M-22.	PI\CM	Is there a completed/approved Hosting Solutions (EA Solution Assessment) document for this system? Approval can be determined by the Unique EA reference number or an approval email from EA.	☐	☐	☐	☐
M-23.	PI\CM	If needed, is there a completed Infrastructure Services Request document?	☐	☐	☐	☐
M-24.	TS	If needed, has an eMichigan Web Review Assessment been done?	☐	☐	☐	☐
M-25.	CM	Is the Requirements Specification (SEM-402), Requirements Traceability Matrix (SEM-401), Hosting Solutions, and Infrastructure Services Request documents under Configuration Management?	☐	☐	☐	☐
M-26.	VER	Were Structured Walkthroughs performed on all required documents for the Requirements Definition Stage (including any revised documents from the Initiation and Planning Stage), as evidenced by the Structured Walkthrough Meeting Record (SEM-187) and the Defect Tracking Log (SEM-186 or equivalent)?	☐	☐	☐	☐
M-27.	VER	Were all key stakeholders present at all Structured Walkthroughs for the Requirements Definition Stage, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
M-28.	VAL	Was a Stage Exit performed for the Requirements Definition Stage, as evidenced by the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐
M-29.	VAL	Were all key stakeholders present at the Requirements Definition Stage Exit Meeting, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐
Functional Design Stage Documents						
M-30.	RM	Was the Functional Design (SEM-501) document created, completed and signed-off by all key stakeholders?	☐	☐	☐	☐
M-31.	CM	Is the Functional Design (SEM-501) document under Configuration Management?	☐	☐	☐	☐
M-32.	VER	Were Structured Walkthroughs performed on all required documents for the Functional Design Stage (including any revised documents from previous stages), as evidenced by the Structured Walkthrough Meeting Record (SEM-187) and the Defect Tracking Log (SEM-186 or equivalent)?	☐	☐	☐	☐
M-33.	VER	Were all key stakeholders present at all Structured Walkthroughs for the Functional Design Stage, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐
M-34.	VAL	Was a Stage Exit performed for the Functional Design Stage, as evidenced by the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐
M-35.	VAL	Were all key stakeholders present at the Functional Design Stage Exit Meeting, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐
System Design Stage Documents						
M-36.	RM	Was the System Design (SEM-604) document created, completed and signed-off by all key stakeholders?	☐	☐	☐	☐
M-37.	RM	Was the Conversion Plan (SEM-601) document created?	☐	☐	☐	☐
M-38.	RM	Was the Test Reports (SEM-603) document created?	☐	☐	☐	☐
M-39.	RM	Was the Test Plan (SEM-602) document created?	☐	☐	☐	☐
M-40.	CM	Is the System Design (SEM-604), Conversion Plan (SEM-601), Test Reports (SEM-603), and Test Plan (SEM-602) documents under Configuration Management?	☐	☐	☐	☐
M-41.	VER	Were Structured Walkthroughs performed on all required documents for the System Design Stage (including any revised documents from previous stages), as evidenced by the Structured Walkthrough Meeting Record (SEM-187) and the Defect Tracking Log (SEM-186 or equivalent)?	☐	☐	☐	☐
M-42.	VER	Were all key stakeholders present at all Structured Walkthroughs for the System Design Stage, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐
M-43.	VAL	Was a Stage Exit performed for the System Design Stage, as evidenced by the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐
M-44.	VAL	Were all key stakeholders present at the System Design Stage Exit Meeting, as evidenced on the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐

ITEM NO.	FINDINGS	AGREED-TO RESOLUTION DATE	DATE RESOLVED

ITEM NO.	FINDINGS	AGREED-TO RESOLUTION DATE	DATE RESOLVED

WORK PRODUCTS AND PROCESSES REVIEWED

ADDITIONAL COMMENTS

State of Michigan
PQA Testing Review Checklist

E. General Information

Project ID/Acronym:		**Review Date:**	
Controlling Agency:		**Authorized By:**	
Review Team Members:			
Hours to Complete Including Preparation, Review, and Inspection Time:			

F. Review

1. If a requirement is fully met, indicate YES with an "X" in the YES column.
2. If a requirement is applicable but not fully met, indicate NO with an "X" in the NO column, whether it is a (Maj)or or (Min)or defect, and provide an explanation in the Comments section.
3. If a requirement is not applicable to the project (for example, if it was tailored out), indicate N/A with an "X" in the N/A column and provide an explanation in the Comments section.
4. Indicate under the Comments section in the Comment column at the bottom of the checklist the specifics of the deficiency, the reason for the requirement's inapplicability, or any amplifying information.
5. Maintain a count of each work product and process reviewed during this PQA Testing Review activity. See the last table. These details are required metrics data.

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
Testing Stage						
T-1.	PP	The test activities were planned and documented. Test Plan (SEM-602), Exp Construction and Testing Plan (SEM-02 Exp)	☐	☐	☐	☐
T-2.	PP	Resources, project team responsibilities, and management activities needed to plan, develop, and implement the testing activities that occurred throughout the project were identified. Project Plan (PMM-03)	☐	☐	☐	☐
T-3.	PP	The occurrence and timing of the test phases in the lifecycle and the entrance and exit criteria for each test type were identified. The test products at each test phase have been specified. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-4.	VER\VAL	Mapping occurred to identify which requirements were verified in what test phase. Final Requirements Traceability Matrix.(SEM-401 or SEM Exp-01)	☐	☐	☐	☐
T-5.	VER\VAL	Testing scenarios were defined to validate project requirements and functionality of software. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-6.	PP	A schedule for executing the test activities was established. Project Plan (PMM-03 or PMM-03 EXP)	☐	☐	☐	☐
T-7.	VER\VAL	Existing test material was obtained and reviewed before testing began (e.g. Test Case Template [SEM-606], previously used test scripts, existing lab protocols, work, etc).	☐	☐	☐	☐
T-8.	VER\VAL	Test Cases were created using the Test Case Template (SEM-606) or other agency specific template. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-9.	VER\VAL	The test methodologies have been published and include the types	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
		of tests required, test documents, test methods, and test data collection. Test Plan (SEM-602)				
T-10.	VER\VAL	Was the test plan reviewed with the system owner prior to conducting any tests. Project Status Reports (PMM-13) Structured Walkthrough Meeting Records (SEM-187) including the Defect Tracking Log (SEM-186) or equivalent.	☐	☐	☐	☐
T-11.	VER\VAL	Verify all the test types checked within the Test Plan (SEM-602) are covered in a Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-12.	VER\VAL	The testing scope is defined and measurable. Test Plan (SEM-602) and Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-13.	VER\VAL	The test setup activities were identified (data, environment, tools, logins, etc.). Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-14.	VER\VAL	The expected results were derived from the scope and success criteria. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-15.	VER\VAL	Peer reviews were conducted on the test cases. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-16.	VER\VAL	Executed test cases and test results are documented. Test Case Template (SEM-606)	☐	☐	☐	☐
T-17.	VER\VAL	Defects were recorded in Defect Tracking Log (SEM-186) or equivalent	☐	☐	☐	☐
T-18.	VER\VAL	The success criteria are defined and measurable. Test Type Approach and Report (SEM-603) Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-19.	VER\VAL	The actual results have been documented and based on scope. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-20.	VER\VAL	The results summary matches the summary in the defect log/tool. Open items in the Defect Tracking Log (SEM-186) or equivalent.	☐	☐	☐	☐
T-21.	VER\VAL	The unresolved test outcomes were documented or referenced. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-22.	VER\VAL	Verify all application performance standards were met. Requirements Traceability Matrix (SEM-401 or SEM Exp-01)	☐	☐	☐	☐
T-23.	VER\VAL	Performance test results were analyzed and shared. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-24.	VER\VAL	Error detection and correction process were in place for each testing phase. Defect Tracking Log (SEM-186) or equivalent.	☐	☐	☐	☐
Unit Testing Phase						
T-25.	VER\VAL	Were **Unit Testing** naming conventions followed? Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-26.	VER\VAL	Were all generic criteria for **Unit Testing** met as defined in the Test Type Approach and Report (SEM-603)?	☐	☐	☐	☐
T-27.	PI	Is there evidence to verify that boundary and both positive and negative tests were performed for every field for all classes, files, programs. Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-28.	VER\VAL	Is there evidence that communication between layers/interfaces (Database, Business, and Web layer) worked as expected? Test Type Approach and Report (SEM-603)?	☐	☐	☐	☐
T-29.	VER\VAL	Is there evidence that failures are handled in a predictable manner? Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
Integration Testing Phase						
T-30.	VER\VAL	Were the previous testing type reports reviewed? Test Type Approach and Report (SEM-603)	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
T-31.	VER\VAL	Is there evidence of **Integration Testing** to verify all application or database interfaces, hardware integration, and security protocols? Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-32.	VER\VAL	Is there evidence confirming that logically grouped units do what they are expected to do? Test Type Approach and Report (SEM-603)				
T-33.	VER\VAL	Were all the generic criteria met for **Integration Testing** as defined in the Test Type Approach and Report (SEM-603)?	☐	☐	☐	☐
Systems and Standards Testing Phase						
T-34.	VER\VAL	Is there evidence of **Systems and Standards Testing** to verify State of Michigan and agency system development standards, and Office of Enterprise Security standards were met? Requirements Specification (SEM-402 or SEM Exp-01)	☐	☐	☐	☐
T-35.	VER\VAL	Is there evidence the testing approach reflects end-to-end business processes and that business processes were identified? Use Case documents or Requirements Traceability Matrix (SEM-401 or SEM Exp-01)	☐	☐	☐	☐
T-36.	VER\VAL	Were all the generic criteria met for **System and Standards Testing** as defined in the Test Type Approach and Report (SEM-603)?	☐	☐	☐	☐
Performance Testing Phase						
T-37.	VER\VAL	Is there evidence of **Performance Testing** to verify performance capacities and stress levels identified in a Service Level Agreement (SLA), e.g., concurrent users and transaction response time? Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-38.	VER\VAL	Were all the generic criteria met for **Performance Testing** as defined in the Test Type Approach and Report (SEM-603)?	☐	☐	☐	☐
User Acceptance Testing (UAT) Phase						
T-39.	VER\VAL	Were test cases/scenarios developed in collaboration with business users that reflected the requirements defined in the Requirements Specification (SEM-0402 or SEM Exp-01)?	☐	☐	☐	☐
T-40.	VER\VAL	Is there evidence to verify that set-up and support were properly established and documented? Software Configuration Management Plan (SEM-302)	☐	☐	☐	☐
T-41.	VER\VAL	Is there evidence that UAT testers were trained on the application and testing process? Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-42.	VER\VAL	Were all the generic criteria met for **User Acceptance Testing** as defined in the Test Type Approach and Report (SEM-603)?	☐	☐	☐	☐
Testing Closeout Phase						
T-43.	DAR	During the Testing Structured Walkthrough the testing results were discussed and the details of the decision were documented within the 'Go' or 'No Go' sections. Structured Walkthrough Meeting Record(s) (SEM-187) including the Defect Tracking Log (SEM-186) or equivalent.	☐	☐	☐	☐
T-44.	DAR	If a 'No Go' decision is reached, were project impacts assessed and documented in the 'No Go' section as well as the appropriate project management document(s)? Test Type Approach and Report (SEM-603)	☐	☐	☐	☐
T-45.	VER\VAL	During the Testing Structured Walkthrough, were the Final Training Plan (SEM-703), Structured Walkthrough Meeting Records (SEM-187), including the Defect Tracking Log (SEM-186)	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
		or equivalent completed and signed-off?				
T-46.	VER\VAL	Were all key stakeholders present at all Structured Walkthroughs for the Testing Stage, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐
T-47.	VER\VAL	Was a Stage Exit performed for the Testing Stage, as evidenced by the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐
T-48.	VER\VAL	Were all key stakeholders present at the Testing Stage Exit Meeting, as evidenced on the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐

ITEM NO.	FINDINGS	AGREED-TO RESOLUTION DATE	DATE RESOLVED

WORK PRODUCTS AND PROCESSES REVIEWED

ADDITIONAL COMMENTS

State of Michigan
PQA Post-Project Review Checklist

G. General Information

Project ID/Acronym:		**Review Date:**	
Controlling Agency:		**Authorized By:**	
Review Team Members:			
Hours to Complete Including Preparation, Review, and Inspection Time:			

H. Review

1. If a requirement is fully met, indicate YES with an "X" in the YES column.
2. If a requirement is applicable but not fully met, indicate NO with an "X" in the NO column, whether it is a (Maj)or or (Min)or defect, and provide an explanation in the Comments section.
3. If a requirement is not applicable to the project (for example, if it was tailored out), indicate N/A with an "X" in the N/A column and provide an explanation in the Comments section.
4. Indicate under the Comments section in the Comment column at the bottom of the checklist the specifics of the deficiency, the reason for the requirement's inapplicability, or any amplifying information.
5. Maintain a count of each work product and process reviewed during this PQA Post Project Review activity. See the last table. These details are required metrics data.

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
Project Control Stage Documents						
P-1.	PMC	Has the Project Schedule been completed – with all tasks marked as such?	☐	☐	☐	☐
P-2.	PMC	If there were significant changes to the project, were one or more Change Requests (PMM-14) completed, and signed-off (approval) by the key project stakeholders?	☐	☐	☐	☐
P-3.	PMC	If there were one or more Change Requests (PMM-14) approved for this project, was the Project Plan (PMM-03 or PMM-03 EXP) and associated attachments (such as the Risk Management Plan, Quality Management Plan, Communication Management Plan, etc.) updated to reflect the changes?	☐	☐	☐	☐
P-4.	PMC	If there were one or more Change Requests (PMM-14) approved for this project, was the Project Schedule updated to reflect the changes?	☐	☐	☐	☐
P-5.	PMC	If there were one or more Change Requests (PMM-14) approved for this project, were all project stakeholders notified?	☐	☐	☐	☐
P-6.	PMC	Are Project Status Reports (PMM-13) used on the project, and being used to monitor current activity status, significant accomplishments for current period, planned activities for next period, financial status, technical status/issues, previous action items, and risk status?	☐	☐	☐	☐
P-7.	PMC	If any Project Issue documents (PMM-15) were used on the project, did they receive sign-off from the key stakeholders?	☐	☐	☐	☐
P-8.	VER\VAL	Has a Post Implementation Evaluation Report (PMM-16 or PMM-16 EXP) been created, reviewed, and signed off by key stakeholders?	☐	☐	☐	☐
P-9.	CM	Was the Post Implementation Evaluation Report (PMM-16 or PMM-16 EXP) document placed under Configuration Management?	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
P-10.	MA	Is the Project Metrics Collection (SEM-188) document completed through the Implementation Stage?	☐	☐	☐	☐
P-11.	SAM	If subcontractors are applicable to this project, is there evidence that they were monitored according to the Statement of Work (SOW)?	☐	☐	☐	☐
Initiation and Planning Stage Documents						
P-12.	TS	Has the Maintenance Plan (SEM-301) been finalized, as evidenced by final signed-off?	☐	☐	☐	☐
P-13.	TS	Has the Security Plan and Assessment (DIT-170 or DIT-170 EXP) document been finalized as evidenced by OES Liaison signoff?	☐	☐	☐	☐
P-14.	TS	Was the Business Continuity Planning (DIT-0208) document finalized, as evidenced by signatures on the document?	☐	☐	☐	☐
Requirements Definition Stage Documents						
P-15.	RM	Was the Requirement Specification document (SEM-402) document available to staff involved in the Construction, Testing, and Implementation stages?	☐	☐	☐	☐
P-16.	RM	Was the Requirements Traceability Matrix (SEM-401) updated during the Construction, Testing, or Implementation Stages to reflect tracing the requirements through these stages?	☐	☐	☐	☐
P-17.	RM	Was the Requirements Traceability Matrix (SEM-401) signed-off by all key stakeholders?	☐	☐	☐	☐
Functional Design Stage Documents						
P-18.	VAL	Was the Functional Design (SEM-501) document available to staff involved in the Construction, Testing, and Implementation stages?	☐	☐	☐	☐
System Design Stage Documents						
P-19.	VAL	Was the System Design (SEM-604) document available to staff involved in the Construction, Testing, and Implementation stages?	☐	☐	☐	☐
P-20.	RM	If needed, was the Conversion Plan (SEM-601) revised and signed-off by all key stakeholders in the Implementation Stage?	☐	☐	☐	☐
P-21.	RM	Was the Test Reports (SEM-603) document revised and signed-off by all key stakeholders during Construction or Testing Stages?	☐	☐	☐	☐
P-22.	TS	Was the Test Plan (SEM-602) document revised and signed-off by all key stakeholders during the Construction Stage?	☐	☐	☐	☐
Construction Stage Documents						
P-23.	TS	If needed, was the Transition Plan (SEM-701) completed and signed-off (both initial and final) by all key stakeholders?	☐	☐	☐	☐
P-24.	TS	If needed, was the Installation Plan (SEM-702) completed and signed-off (both initial and final) by all key stakeholders?	☐	☐	☐	☐
P-25.	OT	If needed, was the Training Plan (SEM-703) completed and signed-off (both initial and final) by all key stakeholders?	☐	☐	☐	☐
P-26.	CM	Are the Transition Plan (SEM-701), Installation Plan (SEM-702), Training Plan (SEM-703), and Training Checklists (SEM-704) documents under Configuration Management?	☐	☐	☐	☐
P-27.	VAL	Were Structured Walkthroughs performed on all required documents for the Construction Stage (including any revised documents from the previous stages), as evidenced by the Structured Walkthrough Meeting Record (SEM-187) and the Defect Tracking Log (SEM-186 or equivalent)?	☐	☐	☐	☐
P-28.	VER	Were all key stakeholders present at all Structured Walkthroughs for the Construction Stage, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐

ITEM NO.	CMMI PROCESS AREA	VERIFICATION ITEM	YES	NO		N/A
				Maj	Min	
P-29.	VER	Were all key stakeholders present at the Construction Stage Exit Meeting, as evidenced on the Structured Walkthrough Meeting Record (SEM-189)?	☐	☐	☐	☐
Implementation Stage Documents						
P-30.	VER\VAL	Have finalized documents from Initiation and Planning, Requirements Definition, System Design, Construction, and Testing stages above been reviewed and signed-off by key stakeholders?	☐	☐	☐	☐
P-31.	VAL	Was a Structured Walkthrough performed on all required documents for the Implementation Stage (including any revised documents from the previous stages), as evidenced by the Structured Walkthrough Meeting Record (SEM-187) and the Defect Tracking Log (SEM-186 or equivalent)?	☐	☐	☐	☐
P-32.	VER	Were all key stakeholders present at all Structured Walkthroughs for the Implementation Stage, as evidenced on the Structured Walkthrough Meeting Record (SEM-187)?	☐	☐	☐	☐
P-33.	VER	Were all key stakeholders present at the Implementation Stage Exit Meeting, as evidenced on the Stage Exit Approvals document (SEM-189)?	☐	☐	☐	☐

ITEM NO.	FINDINGS	AGREED-TO RESOLUTION DATE	DATE RESOLVED

WORK PRODUCTS AND PROCESSES REVIEWED

ADDITIONAL COMMENTS

Project Quality Assessment
Metrics Collection Worksheet

Project Information

Project Name: _____ Agency: _____

Project Size Parameters (estimated or actual) Total Effort Hours: _____ Total Cost: _____

Experienced Project Manager? (Y/N): _____ Quality Assurance Person Assigned? (Y/N): _____

Is PM SUITE Trained? (Y/N): _____ DTMB PM State Employee or Contractor? _____

Review Type: __ Initial __ Mid-Project __ Post-Project __ Other: _____

Date Review Started (mm/dd/yyyy): _____ Date Review Completed (mm/dd/yyyy): _____

PQA Team Information

PQA Team Lead: _____ Total Hours Spent on Review: _____

PQA Team Member: _____ Total Hours Spent on Review: _____

PQA Team Member: _____ Total Hours Spent on Review: _____

PQA Team Member: _____ Total Hours Spent on Review: _____

Project Team Information

Project Manager: _____ Total Hours Spent on Review: _____

Number of Other Team Members Involved in the Review: ____ Total Hours Spent on Review: _____

Compliance Information

Number of Artifacts Reviewed: _____

Checklist(s) Used: __ Initial __ Mid-Project __ Post-Project __ Testing

Compliance Count Totals: Yes: _____ Major: _____ Minor: _____ N/A: _____

Best Practice Information

Number of Best Practice Examples to be referred to PPQA for inclusion in Repository: _____

Number of other Best Practices found that will be shared with other Project Teams: _____

Please Note: Use one Metrics Collection Worksheet per review (typically multiple reviews per project), and turn in a copy to the PPQA Team Lead as soon as the form is complete.

Definitions:

Experienced Project Manager? (Y/N): This question is a bit subjective, but you can often tell if this is one of the first projects that this person has managed.

Quality Assurance Person Assigned? (Y/N): Answer yes to this question if the project manager has explicitly assigned a QA person to the project. This is evidenced by the QA person being named by the project manager in the PQA Plan, the Project Charter (under project org structure, governance, or roles and responsibilities), the project schedule, or by simply asking the project manager.

Is PM SUITE Trained? (Y/N): Answer yes to this question if the project manager has taken at least half of the available SUITE 101 workshops.

Review Type: Check one or more items. Use the "Other" category to specify custom review types, such as a very large project that is undergoing one review per SEM stage.

Total Hours Spent on Review: This is the total number of hours that was spent on PPQA for this project. This includes time spent talking to the project team, scheduling meetings, preparing for meetings, reviewing the documents sent, and performing the actual PQA Assessment. If you are travelling long distance, such as Lansing to Detroit, include this time as well.

Compliance Count Totals: This information is transferred directly from the PQA Checklists. If using multiple checklists – total the counts from all checklists used.

Number of Best Practice Examples to be referred to PPQA for inclusion in Repository: This is a count of all project templates and other artifacts that the PQA Project Team has recommended to be added to the SUITE Best Practices repository in SharePoint.

Number of other Best Practices found that will be shared with other Project Teams: This is a count of all Best Practice processes, tools and techniques that are shared with other systems development groups. This sharing can occur at the SST Community meetings, the SST Leaders meetings, or other such forums in which one or more best practices are shared with others.